



File Edith View Hi Mom! C-Ya **Check it Out ▶**

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Mac

ADDICT 5

HACK Your Mac

**How to do what
you shouldn't!**

- **Fiddle with the Finder**
- **Muck around with menus**
- **Make your Mac the machine
you've always wanted it to be!**

PLUS!

- 29 All-New Products Reviewed
- How to Make Button Bars
- Why Mac Games Are Rebounding

WAIT A MINUTE!
THIS ISN'T FUNNY!



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imagine
a new way of publishing

- ▶ **1997 Predictions**
- ▶ **Making Noise:** From beeps to burps to soundtracks
- ▶ **Apple's Turnaround**
 - New Newtons
 - Back in the Black
 - More Performas

JAN/97

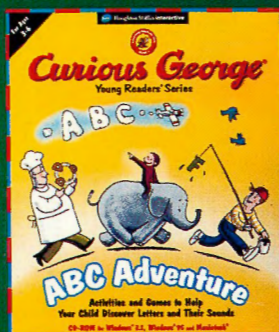
Create a Comic Book

Make QuickTime Movies

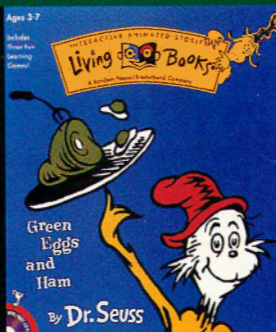
Yet Another Silly Contest!

\$7.99 U.S./\$8.99 CANADA





Join everyone's favorite monkey as he takes your kids on a lively exploration of alphabet sounds, shapes and pronunciations, as well as playing letter games at the zoo. Curious George ABC Adventure is great for a head start on learning. From Houghton Mifflin Interactive.

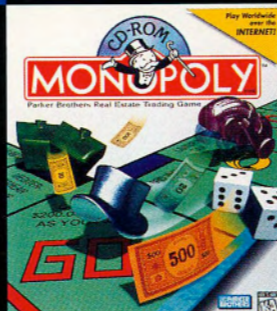


This new interactive animated storybook from Living Books brings Dr. Seuss's most memorable characters to life, enabling your child to learn to love reading in an entirely new way. Green Eggs and Ham will help build your child's memory and observation skills and more.

Encarta 97 Encyclopedia is everything you'd expect from a multimedia encyclopedia. Rich with articles, photos, animation sequences, video clips and a dictionary containing over 65,000 words, this 2-CD-ROM program from Microsoft will teach your kids something new every day.



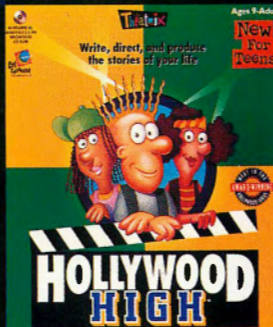
Westwood Studios' CD-ROM version of the MONOPOLY game will entertain you like never before. Rich Uncle Pennybags is your animated Master of Ceremonies as Depression-era Atlantic City comes to life with state-of-the-art 3-D graphics, animation and digital sound.



This holiday



With 4 practice tests and 300 of the most commonly tested words, Inside the SAT and ACT '97 Edition will have your kids mastering these tests and raising their scores faster than you can decide what to do with their rooms when they move out. From The Princeton Review.

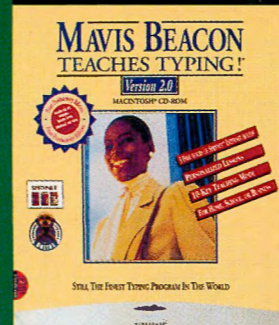


Theatrix brings you Hollywood High, the latest CD-ROM program in the Hollywood series. An animated multimedia program that lets you and your kids write and produce your own movies about your family, friends and favorite places. And people say getting into movies is hard!

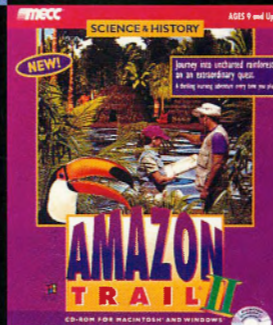
This learning program by GT Interactive is a great way for your kids to explore and discover. Follow along as Critter and his mom's journey to the Big Apple comes alive right before their eyes. Just Me and My Mom will have them playing again and again.



Wishbone™ and the Amazing Odyssey from Palladium Interactive features Wishbone™ in his first CD-ROM adventure. Wishbone™ has been zapped into the animated world of Homer's Odyssey and is trapped in the world of ancient Greece. He needs your help to get home.



Let Mavis Beacon show you the keys to success! With over 4 million copies in use, Mavis Beacon Teaches Typing is the world's best-selling typing program. It's the proven, effective way to learn and improve keyboard skills. From Mindscape, Inc.



Adventure lurks everywhere in Amazon Trail™ II. This interactive program from MECC will have your kids learning about the ecology and history of the Amazon. Interacting with explorers, scientists and indigenous people. And fending off hungry animals and reptiles.



Miracles never cease when you bring home software for your Macintosh® personal computer. And now the thousands of great education and entertainment titles available for the Mac® are as easy to choose as they are to use. You can pick them up at stores like CompUSA, Micro Center, Staples and Fry's Electronics while you're out doing your holiday

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season, wouldn't it be nice to hear the words "cool" and

"parent" used in the same sentence?

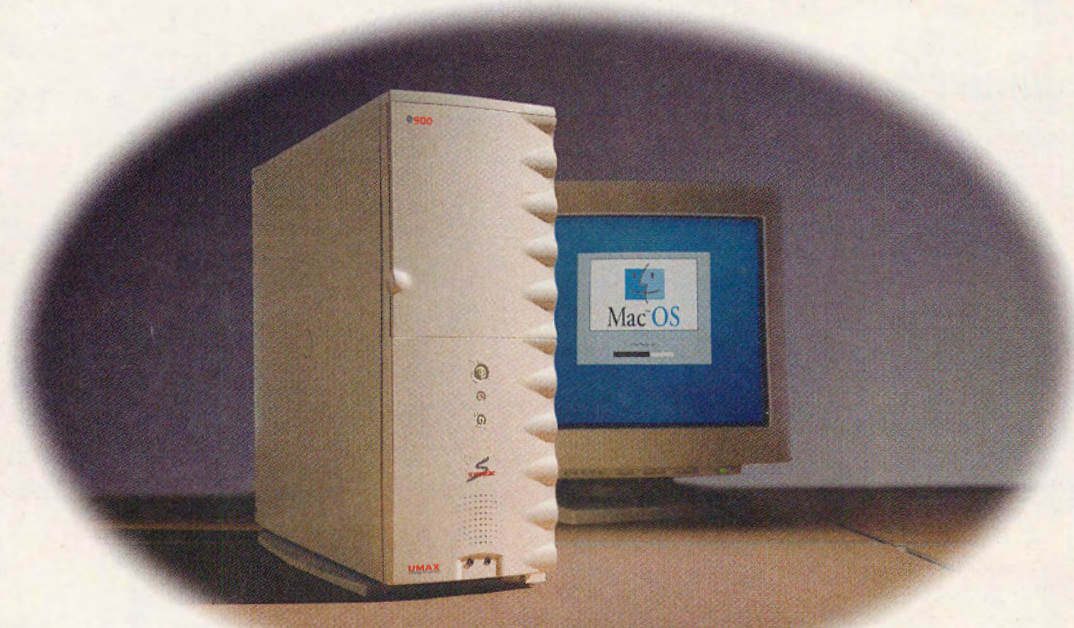


shopping. Or, sit back, relax and shop from home using one of the many Mac mail-order catalogs out there. Or, you can simply hop on the Internet and find them in cyberspace. However you choose to shop for them, remember to look for the smiling Mac OS logo. (All great software wears this face.) With all these options now available, becoming the neighborhood's most envied parent is as easy as using the Mac software your kids will love. To learn more about all the great titles for the Mac, as well as the convenient ways you can get them, visit www.macsoftware.apple.com. **Or call 800-500-4862.**

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Memory Interleaved	Yes	Yes	Yes	Yes	Yes
PCI Expansion	4 PCI Slots	6 PCI slots	6 PCI slots	6 PCI slots	6 PCI slots
PCI-to-PCI Bridge	Yes	Yes	Yes	Yes	Yes
Maximum Memory	1Gbyte	1Gbyte	1Gbyte	1 Gbyte	1Gbyte
Standard Memory	16 MB	32 MB	32 MB	32 MB	32 MB
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Hand up the hammer,
Joe. This one needs
some serious work!

January 1997

Mac ADDICT 5

highlights

38 Hack Your Mac

Despite all those bad movies about hackers, there are actually useful (and fun) things you can do to customize your Mac. You'll learn to tell a resource fork from a data fork, and which one to use with salads. **BY STEFAN ANTHONY**

44 QuickTime Home Studio

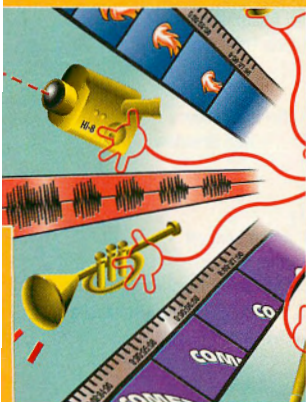
So what you really want to do is direct? Our QuickTime mogul shows you all you need to know to shoot, edit, and produce your own Silicon Babylon on your desktop. **BY STEVEN ANZOVIN**

52 Things That Go Bump in the Mac

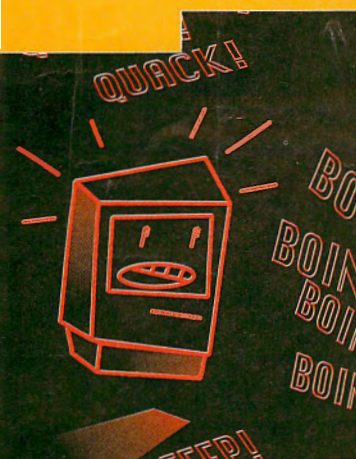
What? What? Could you speak up? Here's how to add sound to a QuickTime movie, make new system beeps and startup sounds, record audio into your Mac, and more. **BY STEVEN ANZOVIN AND RAF ANZOVIN**

60 Predictions '97

The MacAddict Not-So-Psychic Friends Network has gazed at the entrails of a PowerBook and discovered what's in store for 1997. Do the stars control Apple's stock price? We reveal all!



Bob Saget doesn't want 'em.
What to do with all those
home videos gathering dust
in your bookcase.



Quack! Quack! Quack! Quack!
Quack! Quack! and other
interesting points.

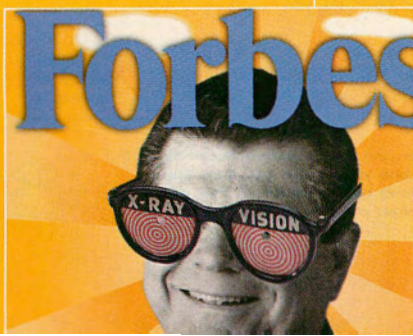
how to

90 Create a Comic Book

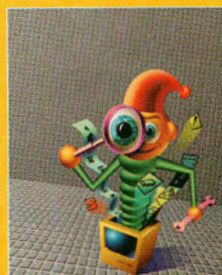
Bam! Pow! Zap! You, too, can make your own four-color fantasy.

94 Make a Button Bar

Button, button, you've got the button. We show you how to make and place a professional-looking set of clickable buttons on your Web page.



You'd smile,
too, if you
could see
the future.



The ResEdit Jack-in-the-Mac
was reinterpreted by Tom
White, who keeps a pair of
Mac's near him at all times.

Get ready to nuke the popcorn!
We've hit the Big Time!



Hey, why does the clock
in 9 say 5? And how
does he tap his ashes?



every month

6 Editor's Note

An interview with John Floisand, Apple's senior VP of worldwide sales.

8 Letters

You know someone's going to say something they'll regret.

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Two new Newtons, Apple makes a profit, Performas get faster, Navigator 3.0 can run in 5MB of RAM, and yet another faaaabulous contest.

34 Cravings

Will this flow of amazing products never end? Well, we hope not.

62 Reviews

Honking-fast towers from Umax and Power Computing, the programs that love them (Canvas, Detailer, and others), and a nifty printer/scanner combo.

98 Ask Us

We answer your queries regarding locked folders, upgrading daughtercards and batteries, and AOL's insidious appropriation of command-Q.

102 PowerPlay

Developers are dreaming of a Mac-gaming Christmas but are still wary. Find out what's going on inside their heads.

128 Shut Down

No, sometimes we don't have anything better to do.

the disc

14

Media mayhem! We've assembled over 40 programs for editing audio and QuickTime movies. Add to that a hacker's toolbox and the regular assortment of new demos and shareware, and you've got a killer disc! Oh yeah, don't forget to find the infamous hot spot to win Opcode's Musicshop 2.0.



online

<http://www.macaddict.com>

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By the time you read this, it'll be a done deal, but at press time we're scribbling away on the totally revamped Web site. Join us on a magical mystery tour of the new, improved site, and sneak backstage to take a peek at the incomprehensible doodles we produced as part of our design process. You'll laugh, you'll cry, you'll rev up your Web browser and careen down the information superhighway to check out <<http://www.macaddict.com>>!

Mac ADDICT

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Associates, Inc., 720 Post Road, Scarsdale, NY 10583

Volume 2, Issue 1

MacADDICT (ISSN 1088-548X) is published monthly by Imagine Publishing, Inc., 150 North Hill Drive, Brisbane, CA 94005, USA. Application to mail at Periodical class postage pending at Brisbane, CA and at additional mailing offices. Newsstand distribution is handled by Curtis Circulation Company. Basic subscription rates: one year (12 issues + 12 CD-ROMs) U.S. \$39.90, Canada \$43.95, U.S. pre-paid funds only. Canadian price includes postage and GST (GST 128220688). (IPM 0962392) Outside the U.S. and Canada, price is \$53.95, U.S. pre-paid funds only. For customer service, write MacAddict, Customer Service, 150 North Hill Drive, Brisbane, CA 94005; 415-468-4869. Send address changes to MacAddict, 150 North Hill Drive, Brisbane, CA 94005. Imagine Publishing also publishes *boot*, *Ultra Game Players*, *Next Generation*, *PC Gamer*, and *The Net*. Entire contents copyright 1997, Imagine Publishing, Inc. All rights reserved. Reproduction in whole or in part is prohibited. Imagine Publishing, Inc. is not affiliated with the companies or products covered in *MacAddict*.

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Reuben, all that Halloween candy
will make your teeth rot. Dan, the
bike tires better be gone. I've got
the cutest dog. Judy, stop worrying!



Macworld says

GOTTA HAVE IT

The Mac OS ought to
work this way.

Until it does,

there's

RAM Charger breaks down inefficient memory
partitions to dynamically allocate memory where
it's really needed. It's compatible with RAM
doubling software, and pumps every System
7 Mac to run multiple RAM-hungry
applications with more reliability.



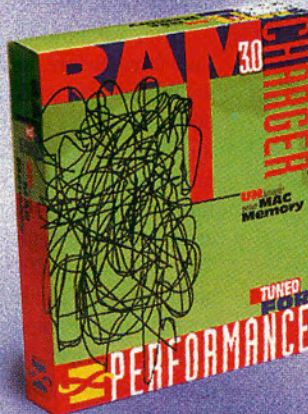
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editor's note

How an Apple senior VP plans to make buying a Mac as easy as using one.

About the time that I'm writing this, a lot of you are starting to buy your holiday gifts. And maybe while you've been out shopping, you stopped at a store to look at new Macs. And, of course, in doing so, you ran into the bozo salesperson who told you that you were crazy for wanting a Mac, or worse, who couldn't answer a single question about the models on display.

Experiences like these are enough to drive any of us Mac loyalists right over the edge (or in the case of today's overcrowded malls, screaming into the parking lot).

So is it going to get better? Is there any hope that Macs are going to get a fair shake in retail stores? What

the heck is Gil Amelio's professional management team doing up there in those glass towers in Cupertino?

To find out what Apple has up its sleeve, I recently interviewed John Floisand, senior vice president of Apple's worldwide sales, over a vegetarian lunch in Cupertino. Floisand moved into his current position shortly after Amelio took the helm of Apple Computer. A company veteran of 11 years, Floisand was formerly president of Apple Pacific, where he handled sales, marketing, and support for the booming Asian markets. He also created the Apple Centers, popular stores in Europe that sell only Apple-branded equipment and that are set up to create an atmosphere that simulates the one in which its target customers will be using their Macs—an office, for example.

"We want to change MIS managers from saying, 'Don't bring in Macs—they breed' to 'OK, we can support Macs.'"

So what is Floisand going to do to shore up Apple's sales? Here's what he had to say.

MA: What is your charter for the worldwide sales and marketing force?

JF: My organization has two roles. The first is to provide the necessary support to people who support our products. In large organizations, for example, there are evangelists who are not on our payroll but should be. My job is to provide the ammo they need to support the Mac.

The second part is to convert MIS managers from being negative, as they are today, to being neutral. We want to change them from saying, "Don't bring in Macs—they breed" to "OK, we can support Macs."

MA: What are you doing to make this happen?

JF: I've started a group that puts together policies and programs, and provides seed units for large accounts, especially large global accounts. This group helps these accounts use the Mac by providing the necessary support and access to distributors and dealers. We provide one central account manager who the corporate representative can go to with problems.

Also, we now have one global sales force. Before, we had good programs that we couldn't implement because the sales teams were divided up into three geographies—the Americas, Europe, and the Pacific. Ideas had to go up through one hierarchy and down through another. Now a good idea in Australia is a good idea in Canada. And in each country, people report to a global business manager to ensure that a program can be localized. We've also

Most of the mail we get is pretty darned original stuff. Amazingly original, in fact. But there are some questions that pop up frequently. Here are our answers to the latest batch of common questions:

Can I get a copy of the cover image?

Not currently. MacAddict buys one-time rights to the cover art. That means we can't just distribute it willy-nilly. This is common practice for magazines.

Why don't you sell MacAddict T-shirts and buttons and stuff?

Mainly because we're currently not set up to sell a variety of products the way a mail-order catalog can. It's something we have thought of, however, and if we decide to do this, you'll be the first to know!

Why don't you put a number on the MacAddict discs so we can tell them apart and can catalog their contents?

We haven't done this so far because it would cause our multimedia enhancement link with the Web site to break. But before our one-year anniversary we should have come up with a labeling solution.

Can you tell me where the secret spot on The Disc is? I can't find it, and I've looked everywhere.

Nope. Can't tell you. If we did, where would the challenge be? But trust us, it's there.

Do you take bribes?

Well, we always keep the bribes you send in, but they have absolutely no effect on our decisions! Of course, we also get more promises of bribes than we get actual bribes...

Can I get a copy of the premiere issue?

They're all gone! There aren't even any left at MacAddict except for our personal copies.

Our Answers to Your Frequently Asked Questions

"The industry is changing. Customers are driven by solutions, not by hardware."

got a global training group that produces the training materials and sales tools used by the Apple sales force in the field and by the dealer and distributor force. Because the group is global, all of these people now get the same message.

MA: What are you doing to promote the Mac to individuals?

JF: We are turning up the heat on advertising quite dramatically. We're going to shout loudly about the Mac's advantages and our solutions.

MA: What is the message?

JF: Seventy-five percent of the world doesn't use computers and is terrified of them, so ease of use is still part of the message. But we're also promoting the ease of doing. For example, someone might want to know, how can my child get access to an encyclopedia on the Internet? We're creating a series of infomercials to show how easy it is to do this.

MA: What is Apple doing to help educate the salespeople in retail stores?

JF: We're reworking the training materials and sales tools that are available. We're putting the materials in a format whereby the recipient can choose the media for their training—CD, paper, video, or seminars. And we're posting materials on the Internet so that they are available immediately down at the store level.

MA: How are you revamping the materials?

JF: Previously, we had a number

of different training materials. A lot of them were generic, things like specification sheets. There were also software materials and materials on third-party products. Then, if the store was really unlucky, [it also received] information from Apple's Imaging Division on monitors and printers. Imagine getting this much information from Apple and Compaq and...

Now we're deciding on a solution to sell. For example, we might say, "This is a family Mac. It's called a Performa." We'll list its advantages all in one document. The industry is changing. Customers are driven by solutions, not by hardware.

MA: What is Apple doing to make shopping for a Mac a more pleasant experience?

JF: We're currently running an experiment in Denmark, where we've created stores that were designed very differently from traditional computer stores. They're light, airy, and open. They provide an atmosphere like that in your home, sort of the way the Ralph Lauren stores do.

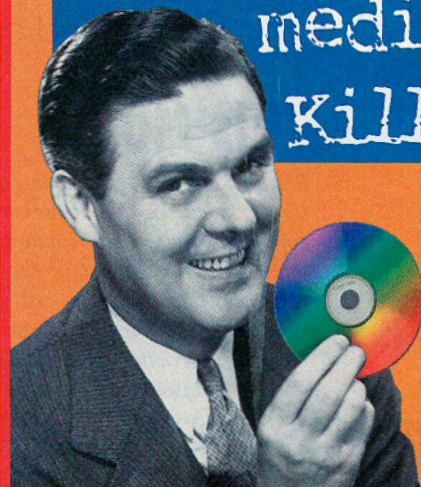
We've opened these stores both as stores in a suburban mall and as a store within a larger store. Families can go in on weekends to shop. No one pressures them by asking, "How many megabytes of RAM do you need?" Some of the stores have a café. All of them have books and magazines. There are clearly marked specialty areas such as Home Education.

We're also looking at providing a same-day installation service when you buy Mac locally. And we may offer training programs, either in-store or at home.

MA: What makes you optimistic that these changes and plans will work?

JF: We had great ideas before [Gil Amelio came onboard] but huge implementation problems. The net result was zero forward movement. Now, under the new organization, we all hear the same message and we are all going in the same direction. There's a lot more traction and a lot more forward movement. —Cheryl England

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letters

Spam and earwigs and sporks and other odd things from you all.

This Month

Reading the mail is among our favorite things to do. We love your stories, your comments, your jokes. We only wish we had more space to run all of the wonderful responses. Write to us at: MacDudes, MacAddict, 150 North Hill Drive, Brisbane, CA 94005, or letters@macaddict.com. For CD-ROM replacements or subscription queries, please call our customer service department at 415-468-4869.



GET ON, GET ACTIVE. Talk to us and talk to other Mac addicts on the Web site.

DARNED EARWIGS

When you promised not to always use roaches in your November Letters section, I thought you were kidding about the earwigs... until one crawled out of one of the pages of the issue as I read it. Granted, the magazine had been resting on the floor next to the chair

SIGHTED



Mac Sign, Take 2

OK, we goofed. Yes, it does happen. We ran a great story from Rick Ling in the last issue, but, uh oops, we forgot to place the real image at press time. So here's the real image plus an abbreviated version of the story:

It was the spring of 1984. I had just bought one of the first Macs in Montreal. Every day as I entered the local dealer's store, there would be a sign on a shelf. That sign was the symbol of a new way of thinking about computers. I was startled one day to find it gone. The assistant manager said it was going to be thrown away. I made an offer of \$20 for it. He considered for about five seconds and the deal was done. The sign now sits on my shelf and sheds light on my ideas and me. —RICK LING

GOT A MAC SIGHTING? SEND IT TO US!



intend to use the correct grammar form "friendlier"? <grin> (Maybe that was written at 3 a.m. in a Jolt and snack food frenzy).
—JIM ROHDE

I have my November issue next to my Mac at all times, ready to swat any PC user that comes within a foot of my precious Mac.
—JON STEFFENS, BINGHAMTON, NY

OH, PLEASE DON'T!

This is my fourth letter to you guys. I know this one doesn't have a chance to get printed, but could you keep me in mind for a future issue? I'll just keep writing and writing and writing until you print one (I hope it doesn't take until my deathbed).
—NITEHAWK D.T. JARRETT II

AWWW

What I love about the Mac, and computers in general, is their ability to blur the generation gap. You have no age when you sit in front of your computer. No one knows and no one cares how old or young you are—you are a Mac lover, and that's all that counts.

Recently I was giving a friend's 13-year-old son some tips. I know that under any other circumstances, he would just be a (gasp!) teenage boy and I would be a (gasp!) middle-aged woman (that is, if I live to be over 100)—but in front of that monitor we were just Mac addicts going 'wow' and 'cool,' looking at all the terrific things the Mac can do.

The Mac has not taken over my life. I still enjoy reading, the opera, dinner with friends, and watching Seattle sunsets with my husband. What it has done is expand my life with knowledge, new friends, and challenges I didn't know existed. Thank you Apple, and thank you, MacAddict.
—MARILYN GLAMKOWSKI

during a cat tending interruption, but I never expected to take the earwig threat literally!
—DONNA BLOCHWITZ

You put your copy of MacAddict on the floor?

By the way, I really hate earwigs, so I say stay with the roaches. —NATHAN THOMPSON

I see little resemblance to any bugs with which I am familiar and any of your staff.
—RAY RIVA, FROM THE MIDDLE WEST
Not even Nikki?

YEAH, THAT'S IT!

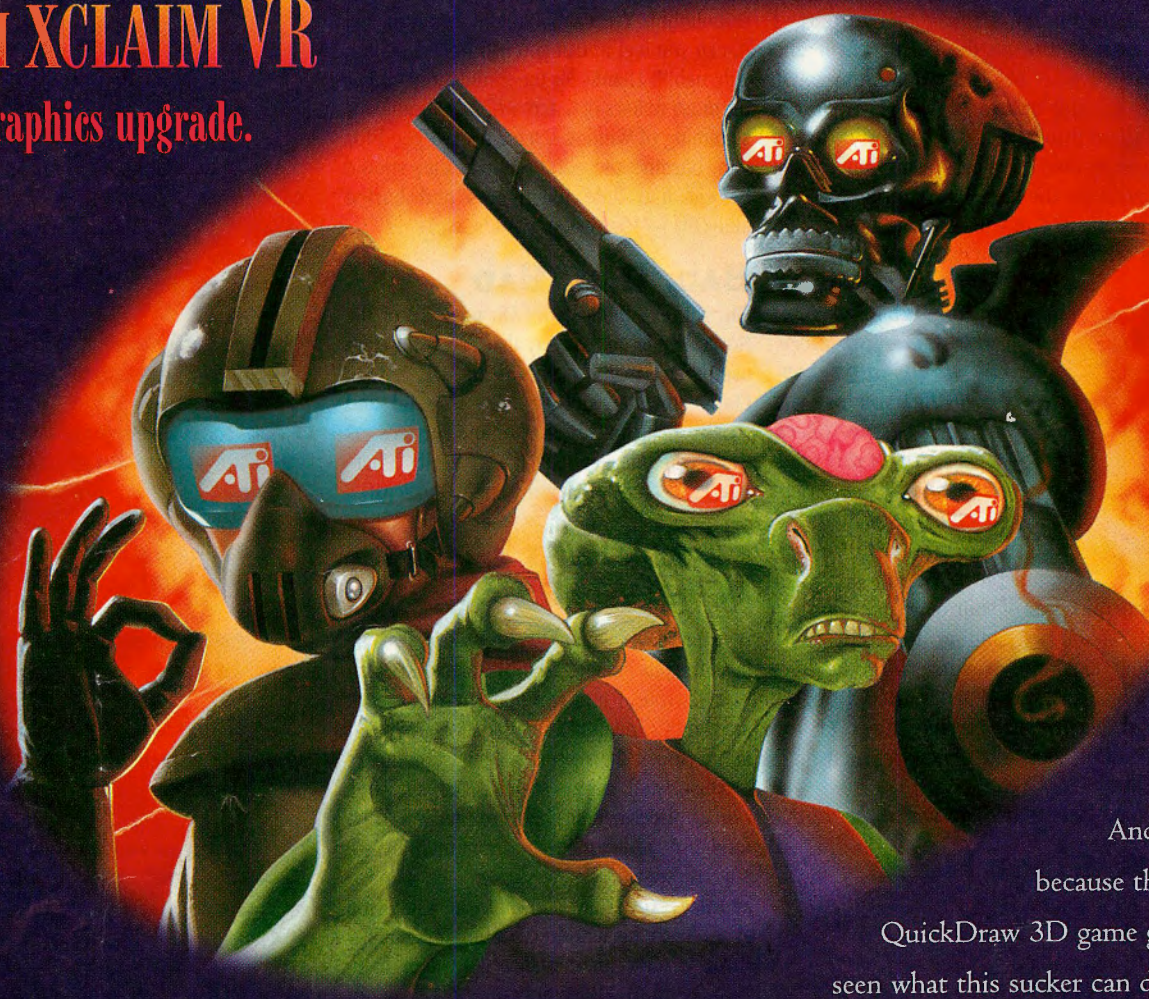
On page 52 of the October issue, where it says "more friendly," did you perchance

3 OUT OF 4 GAME CHARACTERS SURVEYED

would rather humiliate and destroy you while playing on a MAC with an

ATI XCLAIM VR

graphics upgrade.



And that's just because that one last QuickDraw 3D game goon hasn't seen what this sucker can do. How its

MAC2TV feature lets you plug your Mac right into your TV for the ultimate big screen spine-chiller that blows away arcade games once and for all. How its new ATI 3D technology breathes life into everything on screen. With



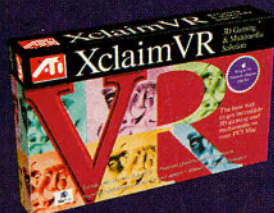
face-blasting speed, butter-smooth 3D detail and full-screen QuickTime video. Oh ya, just in case your left brain demands some sensible reason to run right out and get one, XCLAIM™ VR does mean

business apps, too. And in-your-boss's-face big screen presentations. And video capture from camcorders and

MAC2TV

VCRs. And VR on the Web. And because it's really five upgrades in one, you get more performance and features than a Power Mac 8500. On the other hand, XCLAIM VR costs

just \$269*; so chill out! See your dealer, or see more about it at www.atitech.ca.



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letters

You Did WHAT?!

Help! I bought the second issue of MacAddict in the Philadelphia airport. I immediately tore off the plastic cover and discarded one of those ubiquitous AOL disks! Imagine my horror when I discovered that I had thrown away a wonderful CD! Of course, by then I was halfway to Denver! Can you send me the first issue with the CD and bill me for it? Can you send me the CD that went with the second issue and bill Steve

Case for it? —JOHN D. RIVENBARK

Bummer. Sorry, we're all out of the first issue. No more, nada, uh-uh, ain't happening. But you can get the second issue. Check out page 104 in this issue for information on ordering back issues.



You need to work on the ink that covers the cover of your magazine. One day I fell victim to random New York City weather and my November '96 MacAddict was slightly soaked. When it dried, its cover started peeling and flaking all over the place! Geez, what kind of ink are you using?? —JERRY

You took your MacAddict out in the rain?

T.S. ELIOT HE AIN'T

Nothing's crappy
nothing's bad
they're Mac addicts
they're so rad

PC punks are goin' down
the Mac addicts are in town
IBM makes my dog frown
Bill you are a sickly clown
—ISAAC BELLEVEAU

WHOA!

OK, I bought the first issue and said "whoa," I bought the second issue and said "whoa,"

then I showed it to my friends and they said "whoa" as well. Then, seeing as we are all completely and avidly mindless Mac addicts,

my friends and I each got subscriptions. So, I figured it was about time to write to you and say "whoa." —GOL

Orgasmic position No. 102: Sitting in front of my Mac with an open copy of MacAddict! Oooooohhhh Yeeeeeahhhhhh!!!! Can you feel it, can you feel it, can you feel it!!!! Uggghh, ugh, ugh!!!! Thanks for the stimulation! And as for those writers of letters whining about your slamming of Windows, hangin's too good for 'em, burnin's too good for 'em, they should be cut into little tiny pieces and buried aliiive!!! —JEFF GELONECK, JACKSONVILLE, FL

BAD, BAD, BAD

Oh, you evil things, you! On page 22 of the November issue, you say that "you still can't use other e-mail... clients" with AOL. Not so: Claris em@iler can be used to send and receive mail for scads of online services, as well as the Internet. Plus, it has a really "Phat" interface! —DAVID MURPHY, CHEVY CHASE, MD

FIRST THING WE DO, IS KILL THE LAWYERS

Hey, hey, hey! Just me, Reuben, again, writing from the pits of hell (my job). Check this: Last time I wrote, I told you that I have to work around PCs (aaargh!) and the attorneys won't let me touch their precious little computers because "stuff" always seems to happen when I do (not permanent, because that would be vandalism and there are more of them here). Anyway, we got a new sucker... er, I mean attorney... yesterday, and today he asked me to configure his autoexec.bat file. Imagine my surprise after reading that little gem from MonkeybranD (December, page 12—a tip for creating a message on startup saying "How much easier computing would be with a MACINTOSH"). Anyway, about 30 minutes after configuring (shudder) his crap, I'm walking by his office and I hear, "What the f***?" He comes running out of his office, and to make a long story short, I won't be touching anybody's computer again for a loooong time! —REUBEN REYNORO

Tsk, tsk, Reuben. You really shouldn't torment those poor PC users so!

JUST KIDDING

I just read the review of IndyCar Racing II in the November issue when I noticed you have its street price as \$499! What street did you find it on... Rodeo Drive????!! Please tell me this is a typo!!! —ANTON

Don't you know that the streets in California are paved with gold? Yes, it's a typo. It should read \$49.99.

Top 10 Reasons

Why Erik Klavon Deserves a Free Subscription to MacAddict:

10. Tried standing on street corners but could not make the \$30 needed for a subscription.

9. Tried selling pirated copies of Microsoft software. Lost \$500.

8. Loss of the holy Mac Mag is causing embarrassing twitching problems.

7. People are starting to look at me like I'm an axe murderer or a Microsoft employee.

6. The people at Barnes and Noble are beginning to catch on.

5. Friends are starting to get annoyed when I ask them to fax articles.

4. Starting to feel the cost of those long-distance phone calls to find out what Gil is up to.

3. Considered signing Bill's Black Book.

2. Starting to read "PC World" to fill in free time.

1. Serious trauma due to lack of new articles from the Wise Guy.

Good reasons. But, uh, not good enough! (We can, however, send you some temporary tattoos...)

LIARS! ALL OF YOU!

My wife, upon finding my subscription confirmation to yours truly, stated, "They must have sent this to the wrong place." To which I responded, "I don't know what this is." Like all addicts, I am in denial. —MICHAEL G. MILTON, AUGUSTA, GA
So where do you hide the magazines, Michael?

tHAnks tO tHe nOV'96 iSSue oF mAc aDdIct, i hAVN't sLePT iN 36hRs. —JEFF SOUTTER, MONTREAL, QUEBEC

OOPS! In November's review of KeyQuencer, we incorrectly listed the developer as MVP Solutions. Binary Software (800-824-6279) is the true developer.

AMBER

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Journey into the unknown, unravelling mysteries hidden within compelling stories of heart-rending tragedy,
mind-numbing obsession, and child-like innocence.



<http://www.changeling.com>

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I have been hopelessly seduced by Photoshop for over a year now. My lawn is nearly three feet high, I haven't washed dishes since before the opening arguments in the OJ criminal trial, and I've slept in my bed for a total of 16 hours so far this year because my mouse cord doesn't reach upstairs. But with 70MB of RAM, a few gigs of graphics software, my camera, a scanner, and plenty of beer and Ben & Jerry's Cherry Garcia, I am indeed a Mac addict. —SCOTT D. ALLEN

READER EGGS

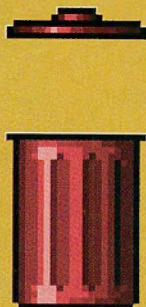
To easily hide a program, press the Option key and click the lower left-hand side of the applications window (right at the edge). —ANDREW WORTHAM

There's a super-fly dope Easter egg on the Marathon 2 CD!!!! I've looked around, but nobody seems to know about it. Yep, that's right, I love you guys so much, I'm telling you the only secret I know. Pop the CD into your Mac, and run the Audio CD player. There'll be a couple of tracks, the title track, and another secret one. Don't worry if there's no sound for a couple seconds. The surprise cuts in at about 25 seconds. Have a ball. —AREND MILLER

Did you know that on a Centris 650 if you hit the restart button, then hurry and hit the programmers key, it will make a weird noise. WOW!! Neat, huh, or did y'all already know that? By the way, what is that noise??? —MARTINS Shoot. We don't have any Centris 650s around. We'll try to find out from Apple what the noise is. Anyone else know?

You Know You're a Mac Addict...

When emptying the kitchen garbage, you say, "The trash contains 47 items. It uses 13 gallons of space. Are you sure you want to permanently remove it?" —ROBERT REID JONES



I'm a graphic artist. I work on my Mac all day, and when I get home, I can't wait to fire up my 7200 and play around, doing digital art or MIDI stuff.

Then when I'm finished with my personal projects and need to relax, I get on my Mac and tweak my system, play chess, or go online. After all this, when I'm away from the computer, I often have fantasies about what I'll do the next time I boot up. Am I a Mac addict?

—TOM WILLIAMSON, PHILADELPHIA, PA

How else do you know when you're a Mac addict? Tell us at letters@macaddict.com.

FOLLOW THIS

In the October Letters column, Stephen Fleming wrote: "I don't think 'Phat' is a word." Oh, my! Would he mind telling that to my 18-pound cat Phredd? No, I'm not kidding. He *is* 18 pounds and his name *is* Phredd. So, I guess you could say he's a... (look out, here it comes)... phat cat... As for my mother-in-law, she's a die-hard Windows95 user and cringes every time the word "Mac" falls from my lips, especially if I'm not referring to her Scotty dog Mrs. Mac. She, too, has a big cat, but his name (no kidding) is Fatty, not Phatty. Sigh.

—GARY D. TOWNSEND

TESTING...

The Disc came with music! I mean, the Mac reads it as an audio CD. The music is OK, but I would rather have the Mac stuff. —GUSTAVO J. LLAVANERAS

That means that The Disc duplicator goofed. To get a working disc with Mac stuff, contact our customer service department (see page 104 of this issue for details).

I got MacAddict today! I ripped open the plastic and threw in the CD and waited for what seemed like forever for my virus software to scan The Disc. I looked all over to see if you verified that it was virus free but could not find anything. Do you/can you certify that the CDs are free of viruses? —TOM GILMORE

We can't 100 percent guarantee that our discs are virus free (our lawyers won't let us), but we can assure you that we run the latest, greatest version of Symantec's SAM on The Disc before it goes out for duplicating. We also check all the shareware files and demos for viruses as we receive them.

GOOD OLD DAD

About two years ago I was in the market for my first home computer. At that time, my dad was working for IBM in its Business Computer Division. Since he was designing the operating system for some of IBM's mainframes, I considered him the first and foremost source of advice on buying a PC.

I called him up, and after a few moments of the normal scuttlebutt, I said, "Dad, I'm going to buy a PC. Which one do you recommend?" He responded by saying, "Son,

throughout your life I may have neglected to give you good sound advice, but this is not one of those times. Go out and buy a Mac, because you'll never be sorry.

Somewhat bewildered at his response, I said "Dad, that sounds like treason since you work for IBM."

He said, "Son, after spending all day long slaving over a stupid prompting-based system, the last thing I want to do when I get home at night is sit down at my PC and deal with the same silly mess."

I took my dad's advice, and you know what? He was right.

—THOMAS WHITSON, DALEVILLE, AL

SPORK 'N' SPAM

DAGNABBIT!!! I've got the answer to November's contest on The Disc, SO WHY ISN'T THERE A BLANK FOR IT?!! Now look what you've done! You've gotten me all in a fluster over this!

If you don't get a blank in there, I'll be forced to raise my evil legion of sporks to storm your offices and pummel you with their Spam pellets. I suggest you comply, lest you deal with their unholy wrath!! —DAN NORD

HELPFUL HINTS

I work in tech support for the distributor of Power Computing in Norway. One problem that has kept coming back is that Aaron might cause problems for the Curves function in Photoshop. Most people I have talked to have stopped having the problem after they removed Aaron. —HENRIK MONSEN

SIGN OFF

BRAVO AND GOOD HAIR DAYS TO YOU!
—AMY MANIS

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"MAY THE PEECE OF GEESE BE WITH YOU"
—TERESA BLOMMERS

Peace, Joy, and Macintosh to you all. —MITCH S. BELL





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System requirements: Universe of Games requires any 256-color Macintosh with 2550K free memory, System 7.1 or later and a double-speed CD-ROM drive. Requirements for Interactive Demos vary, check the Universe of Games CD for details.
Free CD-ROM offer expires March 31, 1997. This request must be received by April 30, 1997. Free product shipped in promotional packaging. Allow 4-6 weeks for processing. This official certificate and check or money order for \$2.95 must accompany your request and may not be reproduced in any manner. Only one (1) coupon will be accepted per family address, household, group or organization. This offer cannot be used in conjunction with any other offer. Not responsible for late, misdirected, incomplete or illegible requests. Void where prohibited, taxed or otherwise restricted. MacPlay is a trademark of Interplay Productions. All rights reserved. All other trademarks and copyrights are property of their respective holders. Offer good in U.S. and Canada only.

**Plus \$2.95 shipping and handling.

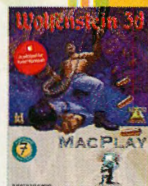
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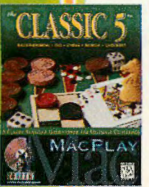
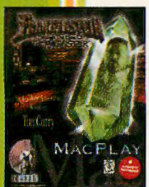


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the disc

More than 600MB of Macintosh mayhem in one place



DEMOS

Visit the Islands of Apache, the Simpsons Cartoon Studio, IndyCar Racing, and ZPC. You'll get a tour of the program and the Web site. No glass-bottomed boats, though.



THIS ISSUE

Here is where you'll find programs and files mentioned in the magazine. Whenever you see a disc icon in print, you'll know to come here on CD.



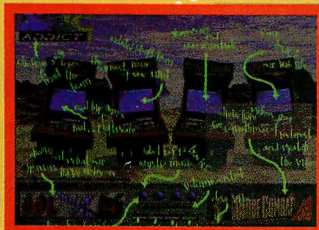
RESOURCES

Here you'll find shareware and freeware to solve almost any problem, create any file, or simply pass the time with fun and games.



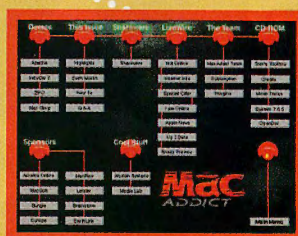
LIVE WIRE

In this section, you can connect to the MacAddict Web site to get the latest news, get links to updated programs on The Disc, and see a sneak peek of the January issue. (And peer at our peerless Webmaster.)



HELP ME

This screen (available on the five main screens) explains the interface of The Disc in a nutshell.



INDEX

This screen provides a handy jumping point to every screen on The Disc.

Feeling a little *déjà vu*? Yes, this main screen looks hauntingly like the December issue's screen. We've been hard at work behind the scenes tweaking the way files are accessed from the CD. Please excuse the mess during reconstruction! On this month's fine, phat CD, you'll find a resource editor's toolbox and dozens of utilities to mangle sound and vision. So, pop in The Disc, put on your headphones, and start hacking away.



GETTING STARTED



1. Pop The Disc into your CD-ROM drive.
2. Double-click the Start Here icon for your System.
3. Have fun!

REQUIREMENTS

Any Mac can access the shareware, demos, and System software from the Finder. Accessing the full CD-ROM interface requires 12MB of real RAM with System 7.1 or earlier; 16MB of real RAM with System 7.5 or later.

OUR DISC SPONSORS

To find immediate information from our sponsors, go to the Index (Option-click on any help screen). Or you can wait until you see a message from them in the lower-right-hand corner of the main screen. Clicking on the message causes a TV screen to slide down from the top of the page, showcasing more information. You can also access information from the sponsors via the main window in the Finder—that's where you'll find SmartSound and ZPC.

Sonic Desktop Solutions—SmartSound For Multimedia



800-454-1900

<http://www.sonicdesktop.com>

Now you can quickly create music or sound effects customized to your exact specifications. This revolutionary new software makes the job easy while always giving you professional results. Try the demo on the enclosed CD and you'll see why SmartSound is the Absolute Easiest Way To Create Customized Professional Quality Soundtracks.

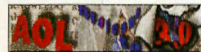
GT Interactive—ZPC



<http://www.gtinteractive.com>

ZPC places the player as Arman, a fourth-generation Psionic War Messiah recently released from cryogenic imprisonment. With no memory of his illustrious heritage, Arman has few clues to his true mission: save his people, vanquish the evil occult group known as the Black Brethren, and utterly destroy the Dark Being they worship. Only then can he reclaim his Psionic crown and unite his followers.

AOL



800-827-6364

<http://www.aol.com>

America Online offers access to the world of online news and information, interactive magazines, finance, entertainment, e-mail, free software, shopping, and more. With a point and a click, you can explore the vast resources of the Internet. Sign on and receive 15 free hours.

Bungie—Marathon Infinity and Abuse



800-295-0060

<http://www.bungie.com>

Marathon Infinity contains Blood Tides of Lh'owon, a brand-new, 30-level scenario; Forge, Bungie's own powerful Map Editor; and Anvil, a single tool for easy modification of shapes, sounds, and physics models.

Brainstorm—Mario Teaches Typing



888-4Brainstorm

<http://www.brainstormfun.com>

Mario Teaches Typing is the sensational four-level sequel to the award-winning original title. All-new animations and an interactive screen combine to make this title more exciting and fun for students. New features include an on-screen magical keyboard with color-coded

keys and fingers, the ability for students to choose or create their own lesson plans, and a lesson editor that enables parents and teachers to control all aspects of the lesson and to generate reports and certificates of completion.

Earthlink—TotalAccess



800-395-8425

<http://www.earthlink.net>

TotalAccess is Earthlink's complete software and Internet connection package. It includes Netscape Navigator, an award-winning Internet access software, and everything needed to register for complete Internet access in less than five minutes. After the \$25 setup fee, unlimited access is provided for \$19.95 per month. Round-the-clock tech support is provided via an 800 number.

Europa Software—Web Quick



<http://www.europasoft.com>

Frustrated by Bookmarks? Web Quick tracks every page you visit and automatically organizes them by site. It lets you create custom Topics and keeps them all at your fingertips with handy pop-up menus. Web Quick even converts existing Bookmarks. No wonder "MacWEEK" called it "the first Web utility that is essential!"

MacPlay—MacPlay Catalog



800-4MACPLAY

<http://www.macplay.com>

Check out MacPlay's latest and greatest titles. There's something for everyone: action, adventure, simulation, classics, musical adventures, and kids programs. There are also some great deals. Check the catalog for details.

MacSoft—Prime Target



800-229-2714

A powerful senator is brutally murdered while working late in her Washington, D.C., office. Now you must solve the mystery of her death in this action-packed 3D shoot-'em-up. Prime Target thrusts you into the most dynamic Mac gaming world ever. Blood spatters on the wall. Glass shatters in your face. This interactive mystery challenges your intellect as you hunt the senator's killers in Washington's corridors of power.

Leister Productions—Reunion



717-697-1378

<http://www.leisterpro.com>

Reunion is a genealogy software program that helps you to document, store, and display genealogy information—names, dates, facts, notes, sources of information, and digitized pictures. Reunion automatically creates common genealogy reports, charts, and forms, as well as birthday calendars, mailing lists, questionnaires, and indexes. It even calculates relationships, ages, and life expectancies. Reunion also displays and prints large, high-resolution, graphic wall charts.

CONTEST

Win!Win!Win!

Brand-new Musicshop 2.0 with Mac MIDI translator!

Musicshop 2.0 lets you record MIDI music on your Mac. You can then edit the music and print it out in the standard notation format. The program now offers real-time editing—you can play back and edit music at the same time! To win this fabulous software, all you need to do is partake of MacAddict madness in its three formats: magazine, CD-ROM, and Web site. We'll give you a clue right here in The Disc pages. When you pop in the CD-ROM, look for a secret hot spot.

You'll be automatically transported to a hidden area of The Disc. You'll need to click some buttons in the correct order. Use the clue from the magazine to help you. When you solve the puzzle, the CD-ROM will give you a code to enter on the Web site. Good luck!!!!



HELP

LOOK! →



You Have a Problem?

What! You need help? Well, if your superphat disc is mangled, warped, broken, or otherwise disturbed, you can get a replacement from IMAGINE's customer service. We've set up a special page on our Web site, <<http://www.macaddict.com/info/service.html>>, where you can order one, or you can call them directly at 415-468-4869. If you can't install anything, or get disk errors, do the same.

If you have a different problem with The Disc, please stop by <<http://www.macaddict.com/cdrom>> before you send us e-mail. If you don't find a solution there, please let us know about it at letters@macaddict.com.

If you're having a problem with System software, we recom-

mend calling the good folks at 800-SOS-APPL. They'll be more than happy to help you.

If you're having trouble with one of the programs on The Disc, please be sure to read the accompanying Read Me file for contact info. To make it easier for you to find help for the programs on our disc, we've conveniently added e-mail and Web contacts in the Shareware and This Issue sections. Whenever you click Install, you'll find the following helpful dialog box:

Shareware Warning

If you encounter any problems with the Shareware you are about to install, please contact the following company:

jcarnein@freenet.columbus.oh.us

LAUNCH WEB SITE

INSTALL SHAREWARE

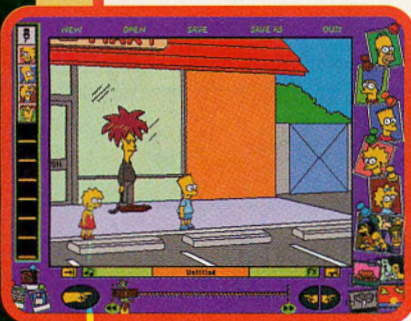


DEMOS

AND THE WINNER IS...

Demos are versions of commercial products that are not fully functional. The majority of demos on The Disc are either products we've reviewed, or products hot off the Net that have not been released yet or were released too late for review in this issue. You can play some of these demos from The Disc itself, but others need to be installed on your hard drive.

1. The Simpsons Cartoon Studio



Use all the characters from "The Simpsons" TV show to create your own animated shorts. The entire Simpsons family is available, in a wide variety of poses. Add a background, sounds, and special effects to make it your own. The retail version offers a player so you can distribute your animation to your friends. Bart and Lisa will be proud.

2. IndyCar Racing



Vroom! Vroom! For sheer virtual racing pleasure, nothing

could be more fun than driving around in circles in your very own custom-painted racing car. Now that Thrustmaster has a steering wheel, there's no excuse not to get behind the wheel. The full version offers 15 different tracks to test your mettle. If you're a driving sim novice, you can start out easy, for example, using automatic transmission and opting to have the car right itself when you crash. As your skills improve, you can wean yourself from these helpful options.

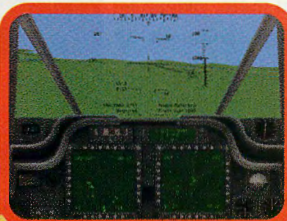
3. ZPC



It seems as though everyone from Lotus Development to Bill Clinton is licensing Bungie's Marathon engine to make a 3D game. ZPC will prove to be one of the more bizarre implementations—the artwork is 2D moving around in a 3D world. You play a messianic character who must save the world (of course) from the evil Third Reich-esque villains. The art, sound, and "chi punches" add up to a just plain disturbing game.

4. Apache

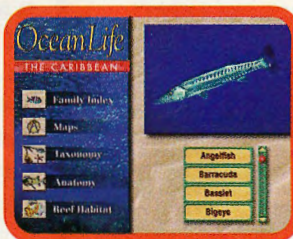
The AH-64D "Longbow" is an awesome helicopter. It not



only packs tons of firepower, but it's also very maneuverable (it can do loops and 360-degree rolls) and provides a sophisticated array of targeting and flight instruments. If you want to *kill*, strap this baby on! Apache offers both an arcade (point-and-kill) mode and a more realistic (crash-and-burn) flight model. You will need to run the Apache installer and install it on your hard drive.

Also on The Disc

Besides these four fine demos, you'll find a bunch more in the Finder. Just open up the Demos folder to find sample versions of Abuse, Retrieve It, NASCAR Racing, Live Picture, Mariner Write, Active Art, and another CD that's sure to please: OceanLife.

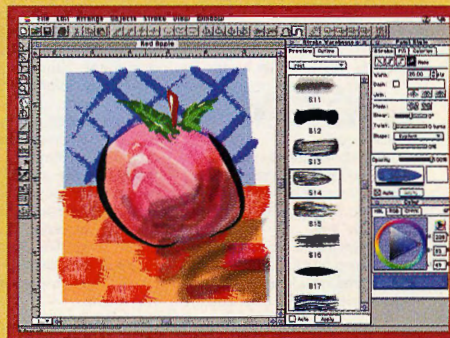


This coffee-table book/field guide/natural-history lesson combo features video and narration about some 200 species of fish found in the Caribbean as well as information about fish behavior, tidal patterns, and dive locations. Glance at some of the videos and rotate a virtual fish to find out more about its anatomy in this demo.

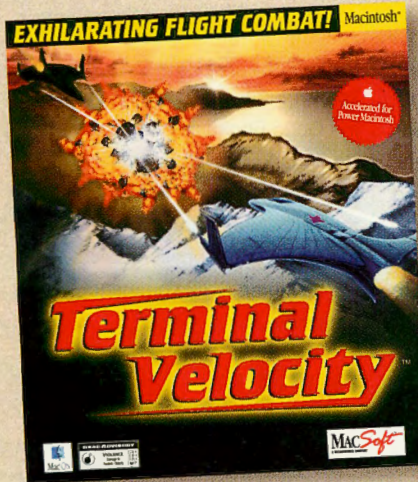
Scott Freedman of Boston, Massachusetts, won the Fractal Design Expression contest from our October issue. Scott was one of 750 entrants who figured out where the pterodactyl was and what the code is. Expect to see Scott on our Web site showcasing his prize.

Why didn't we tell you last month that Scott had won? Well, we decided to give everybody an extra week or so to enter our contests, so as we write this in late October, the contest from our November issue is still open. Tune in next month to find out who is the lucky winner of Claris Home Page, the prize for the third mag-CD-Web game.

If you haven't tried entering one of our contests for free stuff, you should be ashamed of yourself! What other magazine is going to give you all these goodies? And you're just letting them walk out our door without even trying? Flip back a page to find out how you can enter this month's contest.



Games & More Under \$35⁰⁰



THUNDERING POWER. EXPLOSIVE ACTION.

Terminal Velocity is absolutely the most exhilarating flight game available for the Macintosh. It offers fast 3D texture-mapped graphics, full 360-degree flight movement and 7 weapons of extraordinary destruction. Fight your way through 9 unique planets with an awesome array of spectacular air-to-air and air-to-ground combat action.

\$34⁹⁹

(Requires Power Macintosh.
CD-ROM only)



**"...gripping high-speed action
from moment one."**

-Computer Gaming World

**"A symphony of titillating action
and g-force slurping excitement..."**

-Strategy Plus



Mac Arcade Pak 2

More red hot arcade action with five of the best arcade classics ever! Modern-day versions of Pac-Man®, Gauntlet®, Asteroids®, Galaxian® and StarCastle®. Includes a sequel to MacWorld 1995 Hall of Fame and a runner-up for Inside Mac Games 1995 Best Arcade Game.

(CD-ROM only) **\$24⁹⁹**



Absolute Solitaire

We asked dozens of solitaire fanatics to help us design the perfect solitaire package. Absolute Solitaire is what they created. Includes 24 new games and a brand new interface for serious solitaire gameplay.

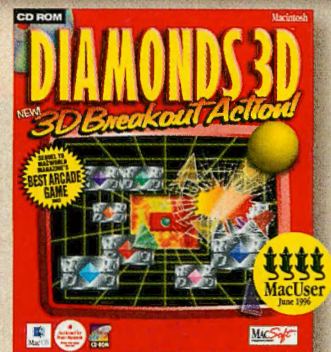
\$24⁹⁹



Casino Game Pack

Quality collection of six popular casino games: Blackjack, Video Poker, Roulette, Slots, Keno and Draw Poker.

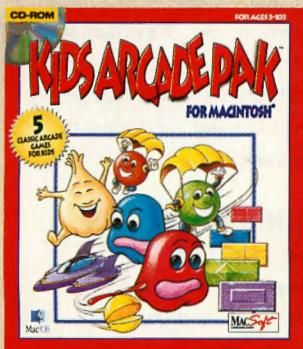
(CD-ROM only) **\$24⁹⁹**



Diamonds 3D

Breakout in three dimensions! Inside Mac Games calls it "Fun and addictive. The best breakout-style game we've played." The ball doesn't bounce up and down, it comes right at you!

(CD-ROM only) **\$24⁹⁹**



Kids Arcade Pak

Kids Arcade Pak is bursting with five classic arcade games designed especially for kids. Each game features large, brightly colored graphics, voice instruction and adjustable difficulty levels. Includes kids' versions of Tetris®, Breakout®, Pac-Man®, Galaxian® and Pinball®.

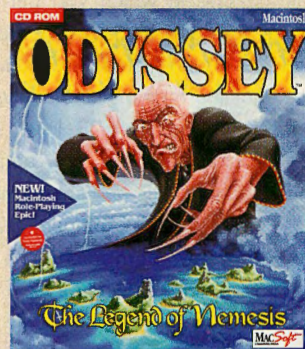
(CD-ROM only) **\$24⁹⁹**



Game Parlor

Outstanding collection of five popular strategy games: Chess, Checkers, Backgammon, Solitaire, Crosswords.

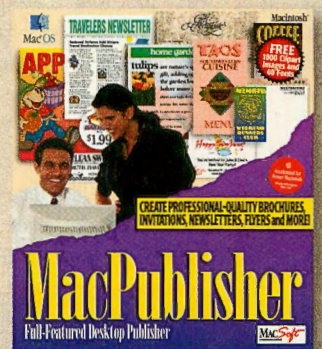
\$24⁹⁹
(CD-ROM only)



Odyssey: The Legend of Nemesis

The most advanced Macintosh role-playing game ever! Venture into the mystical lands of Odyssey. Discover nine islands of extraordinary adventure, fight epic battles and dwell amongst the fascinating inhabitants.

\$34⁹⁹
(CD-ROM only)



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FILES



OUR WEB SITE links to the latest versions of software.

- 1 About Shareware
- 2 System Utilities
- 3 General
- 4 Creative Tools
- 5 Connectivity
- 6 Fun and Games

To get to one of the main categories, just click it. A list of files for that category will appear in the right-hand window. Clicking one of the files in that list brings up the description of that file and causes a weird install widget to appear. To install the file (after reading the description), click the widget. To go back to the list of



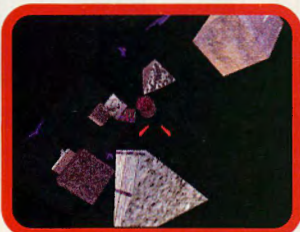
files, click on the description.

Every file on The Disc is now in its own installer—you no longer have to root through various installers for the file you want. If you don't want to use the installers, you can access the file directly from the Finder. We will continue to use installers in the front end, however, because it's just too time-consuming every month to write the code in Director that would link each file to the front end. That said—on to the files.

FUN AND GAMES

ShatterBat

Author: Antennahead Systems
Shareware: \$12



ShatterBat is a fun 3D game in which you get to—you guessed it—run around shattering bats. The bats are of the mammalian variety, not from baseball. Believe it or not, the bats are actually rather brittle and shatter easily into teeny pieces. Grab bonuses from trash cans and avoid the clown head.

CREATIVE TOOLS

Screen Ruler

Author: Micro Fox Software
Shareware: \$10

Although it won't help you

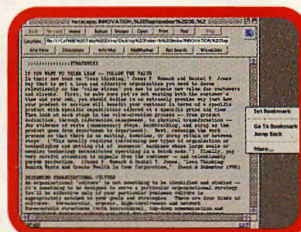
measure windows for drapes, Screen Ruler will display an on-screen ruler. Units are in pixels, picas, inches, or centimeters, and the ruler can be displayed either horizontally or vertically. The ruler is completely resizable and can be moved anywhere on the screen.

STEFAN'S SHAREWARE SELECTIONS

Each month, utility maven Stefan Anthony brings you nifty utilities with which to further destabilize your System!

Bookmark

Author: Coral Research
Shareware: \$15



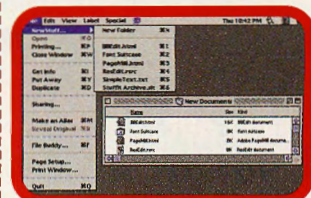
Imagine you're browsing along in Netscape Navigator when you come across a document that is several pages long. Scrolling down as you read, you remember seeing something interesting at the top of the document and so you scroll back up... but wait! You just lost your place.

With Bookmark installed, you'll never lose your place again. To save your place, simply Option-click the scroll thumb and then select the Set Bookmark command in the pop-up menu. To return to your

bookmark, Option-click the scroll thumb again and select the Go to Bookmark command. Bookmark also keeps track of where you drag the scroll thumb. After dragging the thumb to a new location, selecting the Jump Back command... jumps back!

NewStuff

Author: Donald Brown
Freeware

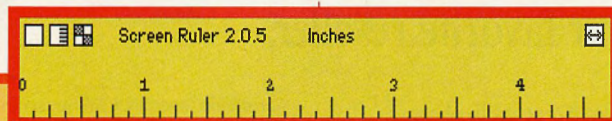


NewStuff is a freeware extension that brings to System 7 users a feature promised in Mac OS 8: The Finder's New Folder command is replaced with a submenu that contains anything from blank text documents to empty font suitcases. Customize the NewStuff menu by moving items in and out of the New Documents folder that NewStuff creates in your System Folder. NewStuff will save the time it would take to launch an application, create a new document, and save that document to disk.

SquelchSysBeep

Author: Jesse Taylor
Freeware

Do you find system alert sounds annoying? SquelchSysBeep is a free extension that stops the system software from beeping—and flashing the menu bar—whenever you accidentally click somewhere or start typing somewhere you should not, which can result in an annoying beep-a-thon. —Stefan Anthony



Enough Work. Let's Play.



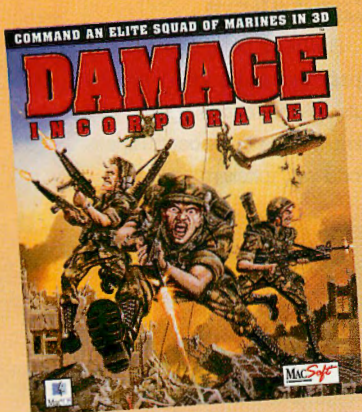
The Most Advanced Mac 3D Shoot-em-up Ever!

A powerful senator is brutally murdered while working late in her Washington D.C. office. Now you must solve the mystery of her death in this action-packed 3D shoot-em-up. Prime Target thrusts you into the most dynamic Mac gaming world ever. Blood splatters on the wall. Glass shatters in your face. You can almost smell the carnage around you!



SYSTEM REQUIREMENTS: Any PowerMacintosh with color monitor and CD-ROM drive.

MSRP: \$49.99 **\$34.99**



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SYSTEM REQUIREMENTS: Any PowerMacintosh with color monitor and CD-ROM drive.

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THIS ISSUE

This month we've been hard at work redesigning access to the files on The Disc. As with the Shareware section, you can now get at every file on The Disc without needing to go into a megainstaller. Here's how the new interface works.

First, dial up the section of the magazine you're interested in. This roughly corresponds to the table of contents in the magazine. To turn the dial clockwise, click on the right side of the dial. To turn it back, click on the left side of the dial.

As you turn the dial, you should notice the categories moving from Highlights to How To to Every Month. This issue's articles from each of these sections will appear in the middle window, with the files from the first article listed in the right-hand window.

Selecting a file from this list will change the right-hand window to a description of that file and make an install widget appear. Click on the widget to install that software, or click on the right-hand window to return to the file list.

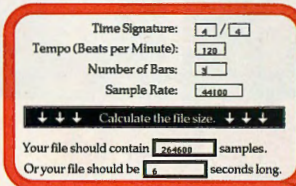
Along with the pretty, new interface, music maestro Tom Hale has added scrumptious sound effects. If the noises get to you, turn them off by clicking on the speaker grill.

HIGHLIGHTS

In the Highlights section, we bring you files from "Hack your Mac" and our sound and QuickTime feature articles. To help you tinker, we've included a copy of ResEdit and a demo of Resorcerer. You'll also find More ResEdit Preferences and System 7 ResEditors, which add functions to ResEdit so it can read more resource types.

Sound

Check out all the loud programs to make music on your Mac. Among them is Beat Monster, a utility that calculates samples based on tempos.



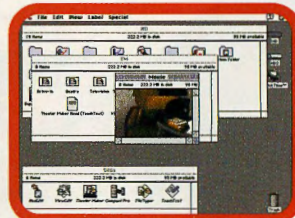
Peak gives you the digital audio tools you need to record and edit audio.



The program Ambiance was designed to play random and looped sound effects while you work with other programs. Yes, you can now imagine that you are in the middle of a forest full of birds chirping when in real life you've got buses honking and people screaming in an urban wasteland.

QuickTime

To help record, edit, and play QuickTime movies, The Disc gives you more than a dozen utilities, including Theater Maker 1.2, which lets you make stand-alone QuickTime movies that automatically play when you double-click them. The movies will also play as part of a larger picture, with the movie framed by a background. Here we see Dennis the Dog framed by a Mac desktop.



MooVer 1.3 creates a QuickTime movie from a sequence of Macintosh PICT data files dropped on it and will also add a soundtrack if a System 7 sound file is dropped on it.



How To

You'll also need to look in the Every Month folder inside the This Issue folder to find the files for the article "How to Create a Button Bar" (page 94) because—sigh—those files didn't quite make it into the Director interface, either. The Director interface does, however, include the companion programs for the tutorial "How to Create a Comic Book" (page 90). And, of course, you can also grab these programs from the Finder interface.

REVIEWS

Also in the Every Month section (and in the Director interface), you'll find demos of programs we review.

Capitalism

Business not going so well? Upset that there won't be any cuts in the capital gains tax? Simulate the cutthroat business world in Capitalism.



Let's Pretend! Many Lands, Many Playgrounds

Flash the Firefly takes kids on a worldwide journey where they learn new words in foreign languages.

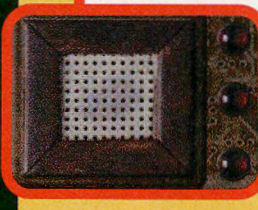


EVERY MONTH

Ask Us

This month's Ask Us column mentions a program called FileList. This file didn't quite make it into our Director interface, so you'll need to grab it from the Finder instead. It's in the Every Month folder inside the This Issue folder.

INSTALL



**Play solo...or go on
the Internet and kick the crap
out of snotty PC owners.**



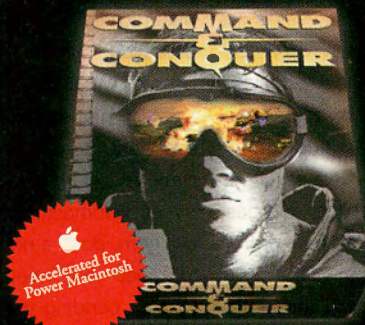
COMMAND & CONQUER

The strategy game that redefines Macintosh gaming.

OVER A MILLION UNITS SOLD WORLD-WIDE.



**Over 40 missions
on two CD-ROMs**



**Dozens of close-ups
and action movies**

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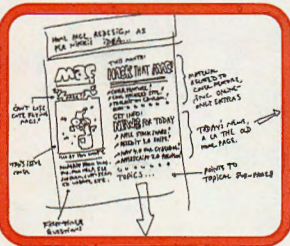
the web site

LIVE WIRE

By the time you read this, it'll be too late. The bold new MacAddict Web site will be in place, and the slightest tap of a mouse will send your Web browser zooming through the ether to show you what we have wrought. In short, it's now a *fait accompli*; how rich the irony that, as we write this, the new MacAddict Web site exists only as scratchings on paper.

In lieu of a tangible Web site for us to describe herein, we'll show you the conceptual doodles and explain a little bit about the twisted thought processes that lurk behind the redesign.

It's Periodical!

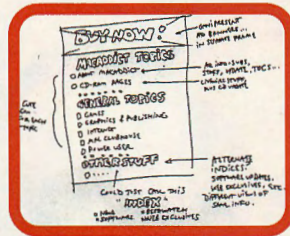


The first thing you'll notice about our revamped site is a radically altered splash page. Instead of a bewildering list of departments and a column of blathering text, we've tidied up a bit. Each month the site will focus on a topic from the corresponding issue, providing supplemental material and links to expand on your reading experience. Thus, rather than hack its own lonely machete-wielding path through the undergrowth of the Macintosh jungle, the site joins with the magazine and disc to form a coordi-

nated expeditionary party.

Of course, the MacAddict Web site would be much the poorer without its daily stream of gabby news nuggets. These will continue unabated, though they won't occupy as much of the limited real estate.

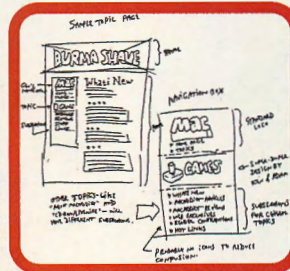
It's Topical!



Say goodbye to the familiar arrangement of This Issue, Web Exclusives, Discussions, Hot Links, and their little friends. Say hello to the new regime, in which the Web site's innards are organized by topic. Games, graphics, the Internet, the fate of Apple, and other worthy preoccupations of the Mac addict will all get their own sections. These topics are like little Web sites in microcosm, each with its own stock of news blurbs, links, software updates, listings of reviews and features from the magazine, and interactive reader forums.

Whatever your area of interest, the new design should make it easy for you to look up useful MacAddict articles from back issues, find cool resources online, and get the latest scoop on new products and updates. If you find yourself missing the old departments and their familiar icons, you can always turn to page 24 of our November issue and take a walk down memory lane.

It's Aesthetically Pleasing!



Having pioneered techniques in abuse of Netscape Navigator frames and cramming ad banners into unlikely places, the Web site is adopting yet another oddball approach. Frames will be, for the most part, totally eliminated; modern users should notice a significant speed increase. Ads will likely be displayed in an independent frame.

What of the familiar title and navigation bars, crammed with kooky controls and fascinatingly obtuse icons? Away they go, replaced by a consistent NavigationBlock™ design. Horizontal doodads being somewhat passé, we felt it was time to try a little vertical integration.

It's New!

Remember, folks, the MacAddict Web site is a living, breathing, dynamic organism. If you enter its URL, does it not load? If you explore it, does it not dazzle? And if you write to us at webmaster@macaddict.com, does it not adapt to meet your needs and wishes, pending the capabilities of your loyal online editor, patent pending, all rights reserved, offer not valid in Delaware and parts of Nebraska? —MS

We know that some of you wonder what's in our coffeepot. You asked us. Well, we're not showing you the coffeepot (trade secret), but we have set up a special Web camera so you can see us at work. Or, more specifically, you can see our online editor, Mark Simmons, hard at work. Just hop on over to the Live Wire section and you'll be connected to a QuickCam pointed at our beloved Webmaster. You don't even need to be connected to the Web! ;-)

While you're there, the Live Wire buttons will connect you to the special news, update, and sneak-peek pages on our Web site. As we did last month, we are linking you directly into a Web browser. The method we devised tells our Director shell to open a page in this browser. Unfortunately, Director thinks it doesn't have to send the page if the browser is already open. We're trying to fix this, but in the meantime, you'll need to quit out of the browser before opening a new link.



HE LOOKS LIKE HE'S HARD AT WORK, but Mark is secretly updating <<http://gundam.anime.net>>.

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get info

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Nouveau Newtons

FOR SCHOOL & TRAVEL



APPLE KEEPS ITS PROMISE with the eMate 300. Rugged industrial design coupled with a more mature mobile operating system makes for a tough shell to crack.

Quick—what do you get when you cross Apple technology with a microwave? The Information Appliances Division. One of four new divisions created under Gil Amelio's adult supervision, Information Appliances has Newtons and Pippins in its realm. Although the Pippin managed to be the first shipping "network computer" without anybody noticing, the Newton side has borne some tasty fruit with its two new products.

In the Mobile Business Appliance side of the ring, we have the MessagePad 2000. Whether the name merely serves as a

reminder that Apple's technology does not suffer from the year 2000 bug or it's just a result of general millennium mayhem doesn't really matter—this is one spiffy little device. And it's the first MessagePad that comes close to appliancehood rather than simply being an executive novelty item.

First, the MessagePad 2000 sports a 160MHz StrongARM processor, which runs 10 times faster than the processor in the MessagePad 130. Not only are response times noticeably faster on the MessagePad 2000, but the increased processor speed allows the MessagePad 2000 to do multiple things at once. What things, you ask? Well, the MessagePad 2000 has a built-in microphone for recording sound, which you can do while, say, taking notes. You can record up to an hour of audio on a 4MB flash ROM card and play it back through the MessagePad 2000. Unfortunately, there's currently no way to get the sound out of the MessagePad and into a Mac.

Second, no more wimping out after only three to six hours of operation, like the average PowerBook and previous MessagePads. The mighty MessagePad 2000 chugs along for 24 hours of continuous use, or, according to Apple, a whopping three to six *weeks* of average use. All that working time is available by popping in just 4 AA batteries!

The MessagePad 2000 also includes better communications abilities. With two PC card slots, you can keep a modem in one and extra memory in the other. The backlit screen now offers 16 levels of gray and is a bit larger—480 x 320 pixels—giving the MessagePad new functionality. For example, AllPen's NetHopper Web browser—which is included—can now display images as well as text. Oh yeah, along with the kitchen sink, the MessagePad 2000 bundles NewtonWorks for word processing and drawing, QuickFigure Pro for spreadsheet work, an e-mail client, and Newton Connection Utilities for connecting to a Mac. The MessagePad 2000 will cost

less than a thousand dollars and will be available early in 1997 through retail outlets and catalogs.

Technology Is Your Pet

Although the next century probably won't see robots servicing our every need, as in 1950s utopian dreams, there will be a Newton in every child's backpack if the Apple Education Division has its way. The Apple eMate 300 is as cool a tool as this Mac addict has ever seen, even on "Star Trek." Sporting a keyboard and Newton technology integrated into a clamshell case with a built-in handle, the eMate delivers one of the more aggressive industrial designs Apple has promised.

To keep costs in line with the education market's needs, the eMate does not use the

The new eMate 300 is as cool a tool as this Mac addict has ever seen.

MessagePad 2000's StrongARM processor but instead settles for the weaker ARM 710. Like the MessagePad 2000, however, the eMate includes a microphone and speaker for recording and playing back audio. The eMate is larger, heavier, and much more ruggedly constructed than the MessagePad. Its screen is about the width of a piece of paper and has a resolution of 480 x 320 with 16 levels of gray, giving a slightly larger type size than on the MessagePad 2000. The nickel metal-hydride battery pack lasts for about 28 hours of continuous use. Altogether, the eMate weighs about four pounds.

Along with the Names, Dates, and Notepad already on the Newton, the eMate includes NewtonWorks and a special setup program for teachers to customize functionality. The English version will be available early in '97 for K-12 education channels only, with prices starting at less than \$800. —KT

GONE BUT NOT



Guy's on the road, spreading the word. Look for him next month. Keep sending questions to: letters@macaddict.com.

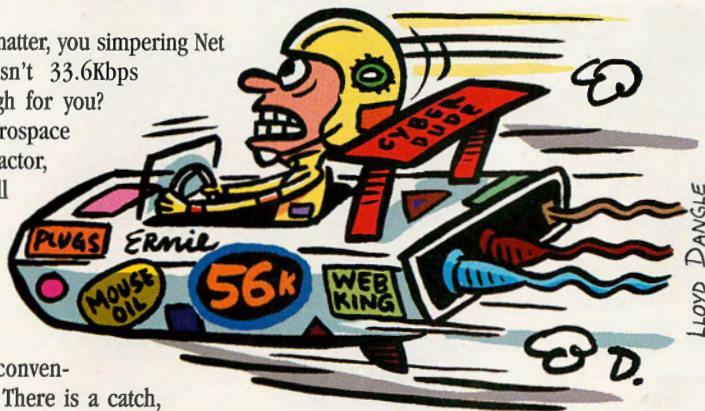
FOR LONG

56KBPS MODEMS

RUN FAST ON A ONE-WAY TRACK

What's the matter, you simpering Net wimps? Isn't 33.6Kbps fast enough for you?

Rockwell, famed aerospace and defense contractor, announced it will push the modem-standards envelope with a new chipset that allows speeds of up to 56Kbps over conventional phone lines. There is a catch, however. The Rockwell chipset allows 56Kbps speeds in only one direction—from the server to the client. Great for Web surfers, not so great for anyone who requires a two-way speed bump, such as video conferencers and speakerphone conversers. Hayes, Zoom, and Diamond Multimedia



reportedly plan to release speedier modems within the next year. US Robotics is working on its own chipset and will not use Rockwell's. No one is ready to talk prices and compatibility, but Diamond has announced plans for a Mac-compatible version. —DR



ENTER NOW AND WIN WARCRAFT BATTLECHEST!

Macophiles are accused of anthropomorphizing their beloved machines, but it's not our fault. Apple encourages this behavior by enabling us to name our Macs, just as we would a pet. And just as dogs and their owners begin to look alike over time, you can tell who named their Mac what. To win a copy of Blizzard Entertainment's Warcraft Battlechest, match the MacAddict staffer with his or her Mac. If no one gets all the answers right, we'll choose from among the entries with the most correct answers. Submit your answer by January 7 to our Web site or snailmail it to us at MacAddict Names, 150 North Hill Drive, Brisbane, CA 94005. —KT

get info

RAM-SUCKING NAVIGATOR

If you're addicted to Web surfing, you were excited when Netscape released Navigator 3.0 and Navigator Gold 3.0. But your excitement waned when you saw the memory requirements: 7 to 9MB for Navigator 3.0, and 10 to 12MB for Navigator Gold 3.0! How did this happen, and what are everyday people with everyday Macs supposed to do?

Navigator 3.0 and Navigator Gold 3.0 need a lot of memory for two primary reasons: Java and plug-ins. Running a Java applet means you're simulating a separate computer within your

Web browser, and that computer needs its own memory. Furthermore, a plug-in showing a QuickTime or Shockwave movie can consume a few megabytes. If you imagine a Web page with an applet, a movie, and an Adobe Acrobat PDF file, you'll know why people buy RAM just to use Navigator.

Here's a quick-and-dirty guide to using Navigator 3.0 in only 5MB of RAM:

- The main difference between Navigator Gold 3.0 and Navigator 3.0 is the HTML tools in Gold. Write your HTML in BareBones' BBEdit Lite and forget about Navigator Gold.

- Navigator's e-mail and Usenet news features are improving, but they're hardly state of the art. Use dedicated programs such as Qualcomm's Eudora and the shareware NewsWatcher instead.

- Using the Mac's Virtual Memory or Connectix's RAM

Doubler will let Navigator use its memory more intelligently, especially when running under System 7.5 and later.

- Set Navigator 3.0's minimum and preferred memory size to 5,120K in the program's Get Info window.

The Finder will complain that this setting is too low;

just go ahead and click OK.

- Open Navigator's plug-ins folder and remove everything except the file Default Plug-in. You won't be able to access some things such as QuickTime movies from Web sites, but very few Web sites *require* these plug-ins.

- Launch Navigator, and then turn off both Java and JavaScript under the Languages tab in Navigator's Network Preferences. Again, you won't

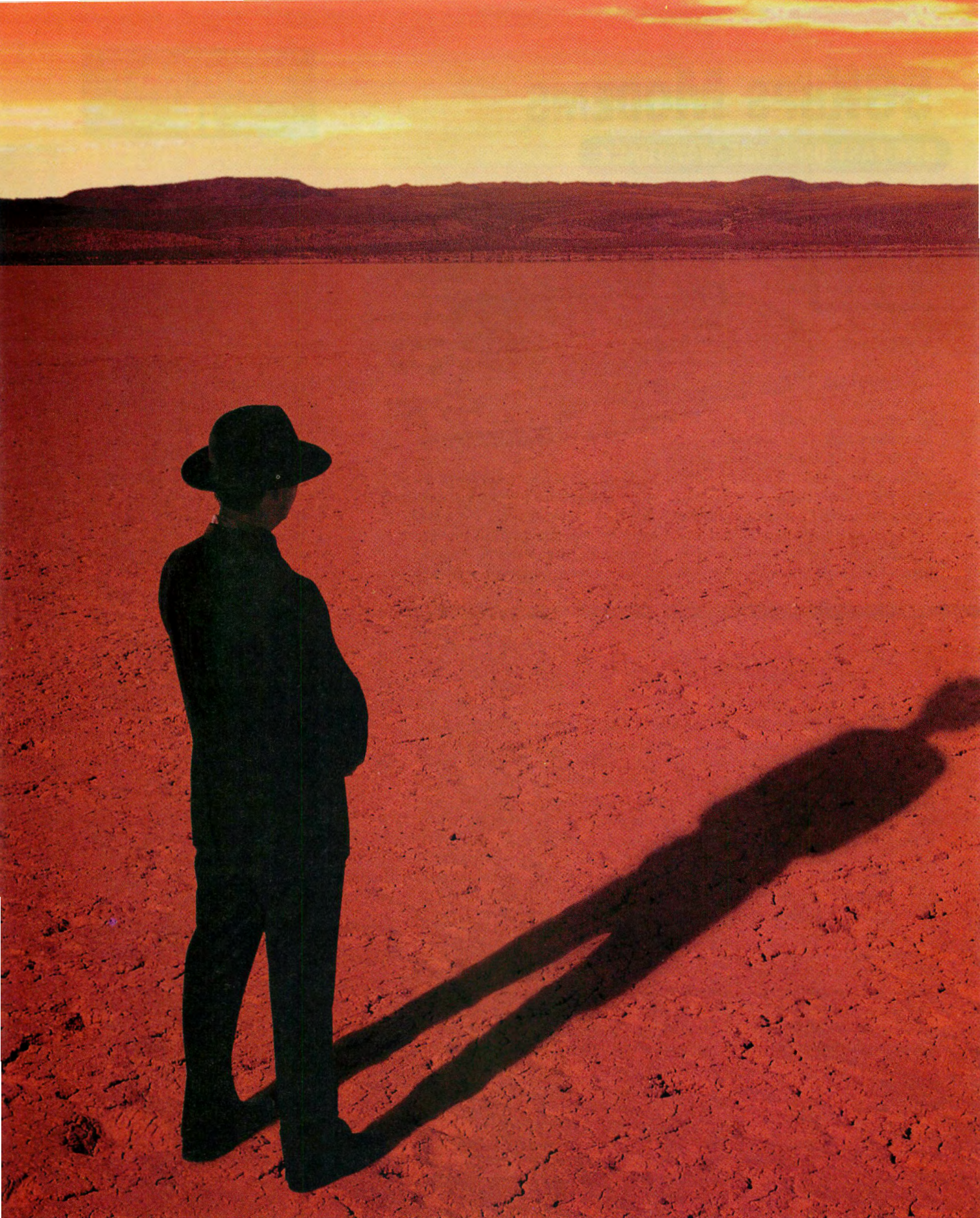
- | | |
|---------------------|---------------------------|
| 1. Cheryl England | a. Hal |
| 2. Judy Lewenthal | b. OZ |
| 3. Nikki Echler | c. Jim/Nora (partitioned) |
| 4. David Reynolds | d. MacAddam |
| 5. Kathy Tafel | e. Me, myself, and mine |
| 6. Dan Turner | f. Joodle Doodle |
| 7. Mark Simmons | g. Brody |
| 8. Tom Hale | h. Mephisto |
| 9. Ken Bousquet | i. The Mac |
| 10. Adam Vanderhoof | j. Mr. Peabody |

be able to access Java applets on Web sites, but very few Web sites *require* you to see these applets.

Here's a quick-and-dirty guide to using Navigator 3.0 with just a teensy 5MB of RAM.

Hogtie that piggy, boys!

After all this, you might wonder why you're using Navigator 3.0 at all. Don't forget: Navigator 3.0 is Open Transport-native (so you get better performance, even over a modem), it supports frames and all the latest HTML tags, and it fixes bugs in Navigator 2.0. If 5MB is still too rich for your blood, Navigator 2.0.2 runs happily in 3MB, and it's still available from Netscape's sites. —Geoff Duncan



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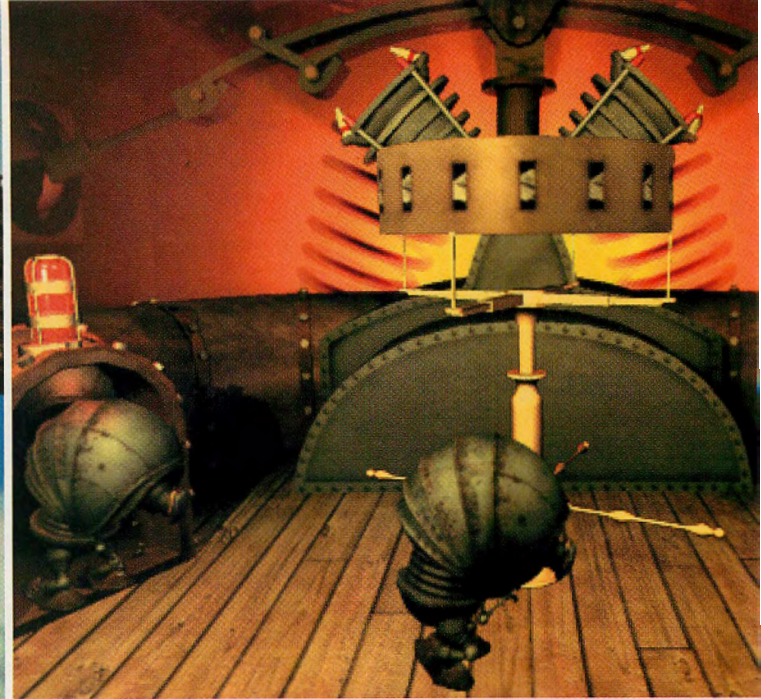
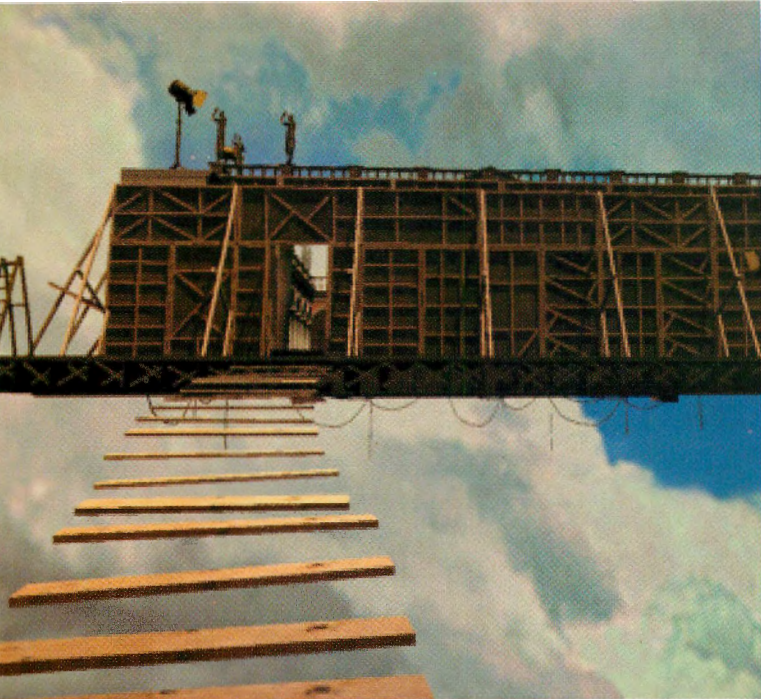


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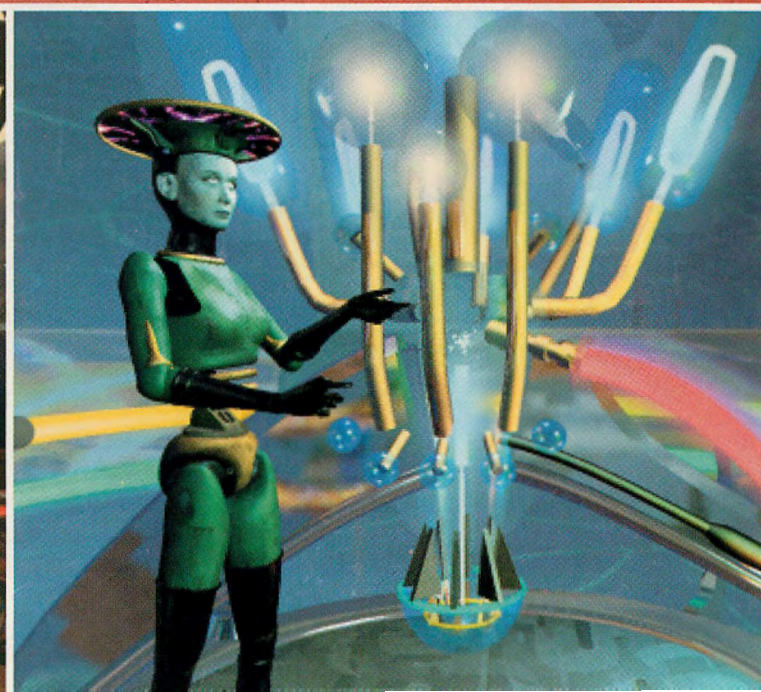
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NEW

MACINTAX FOR 1996

(Inuit: 800-448-8848;
<http://www.qfn.com>; \$34.95 (street); \$49.95
(street) for the Deluxe version; scheduled to
ship November 1996)

New features in the Headstart version of this popular tax preparation product include a final review of your return that lets you compare it with returns of other filers in the same tax bracket, plus more personalized tax-saving advice than previous releases. The Deluxe version includes the text of two tax books as well as the IRS tax rules. Purchasers of the Headstart version will automatically receive the final version.

SUPERMAC C600/240, S900DP/180

(Umax Computer: 510-226-6886;
<http://www.supermac.com>; \$2,295 (srp) and
\$4,695 (srp), respectively; scheduled to
ship November 1996)

The C600/240 minitower contains a 240MHz 603e processor. The system includes 24MB of RAM, a 256K Level 2 cache, an 8X CD-ROM drive, a 28.8Kbps modem, a 2GB hard drive, and three PCI slots. For the super power user, the S900DP/180 houses two 180MHz 604e processors in a tower case and includes all the high-end gizmos you'd expect in a multi-processing system: 32MB of RAM, eight DIMM slots, 4MB of VRAM, an 8X CD-ROM drive, a 2GB hard drive, six PCI slots, and five drive bays.

XCLAIM VR

(ATI Technologies: 905-882-2600;
<http://www.atitech.ca>; \$269 (srp) for 2MB
version; \$349 (srp) for 4MB version; sched-
uled to ship November 1996)

This PCI card offers video capture, QuickTime playback acceleration, QuickDraw 3D acceleration (perfect for games), regular QuickDraw 2D acceleration, and TV out functions. The upgradable 2MB version of the board offers 16.7 million colors at 832 x 624 resolution. The 4MB version offers 16.7 million colors at 1,152 x 870. You can add an optional TV tuner for \$99 (srp).

FOR THE MAC

get info

Contest Winners

After gathering all the correct answers to the October issue's Macintosh Mystery (wherein Arthur, an ocelomarmot researcher who lives in a cabin in the redwoods, began having problems getting his Mac to read his floppy disks), we've picked a winner from our electronic hat. Bill Schram correctly said that Arthur, upon opening a disk, found... mildew (we also accepted mold as a correct answer).

The range of answers to the October Macintosh Mystery were amazing and often amusing. Some readers who entered said that they had experienced the problem themselves and lived to tell about it. Fan Li Tai even came up with an innovative solution: "The disk had left fungi on the drive head, and I had to open it up and clean it," says Tai. "After that, I got fed up and poured lots of drive cleaner onto the disk—stuck it in and let the drive head clean the disk for me. After about 17 applications of solvent/reboots, the game [on the disk] finally ran."

The folks who didn't get the right answer sent some creative replies. Many thought that insects of some sort—spiders, caterpillars, lightning bugs, roaches, or moth larvae—caused Arthur's disk dilemma. Some were quite confident that their answers were correct. "This is a fiendishly clever problem? Isn't it obvious?" said Mike (no last name), who proceeded to give us an incorrect answer involving creating glue with a combination of cotton, dust, and condensation. "When will you inform me that I won?" Sorry, Mike, close, but no Symantec suite.

Many readers blamed the ocelomarmots themselves for the disk failure, speculating on everything from "an ocelomarmot ate the magnetic strip in his disk" (Austin Shoemaker) to "part of [ocelomarmots'] licking habits were licking the inside of computer disks. Consequently, when Arthur looked inside his disk, he found they were warped and some of his newest entries still had saliva on them" (Laurel Sommer). W. Blair Kenney was suspicious of the furry mammals, stating the problems stemmed from "the ocelomarmots, if they indeed are who they claim to be."



get info

LLOYD DANGLE

A few readers blamed an animal of an other species for the disk failure. "As Arthur opens the disk, he is not altogether surprised to see a GIF of a smiling Bill Gates. Heck, that would damage any disk" (Chuck Humbert). "He found a note: 'Caution: Windoze 95 Formatted'" (Jacky Gagnon). "Little beads of sweat from the brow of Bill Gates as he realizes he misread this whole Internet thing" (Glenn Scott). "... it was William Shatner singing 'Mister Tambourine Man...'" (Sean D. Schoettler). Whoops. That's another Bill.

OCTOBER'S MYSTERY REVEALED

Some answers were in categories all their own. "Crud?" (Aaron Lawrence). "He found that the mechanism was frozen and full of bear's fur. So he cooked the floppy drive and ate a hot fur soup while his drive worked just fine" (Gerson Campos de Anda). "An anagram for ocelomarmot, which is More Mac Loot" (Ellen Ostromecki). And our favorite, "Moisture. Either that, or one of the Saturnians who are plotting world domination. They came from Saturn 17 years ago and have been slowly penetrating our defenses before we even know of them! They live in everything now: TVs, cars, computers (the only exception is microwaves, but that would be disgusting and we won't get into that), and if my theory is correct, they destroyed good ol' Arthur's disks" (Dan Nord).

So congratulations, Bill, for your correct answer and being the right random number. Thanks go to Mark Rose for the most intricate and interesting envelope, and a special "Hello" goes to the Boyntons in Bogalusa, Louisiana. Thanks for writing—several times. —DR

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Playing the Numbers

IT'S ABOUT TIME APPLE TURNED A PROFIT

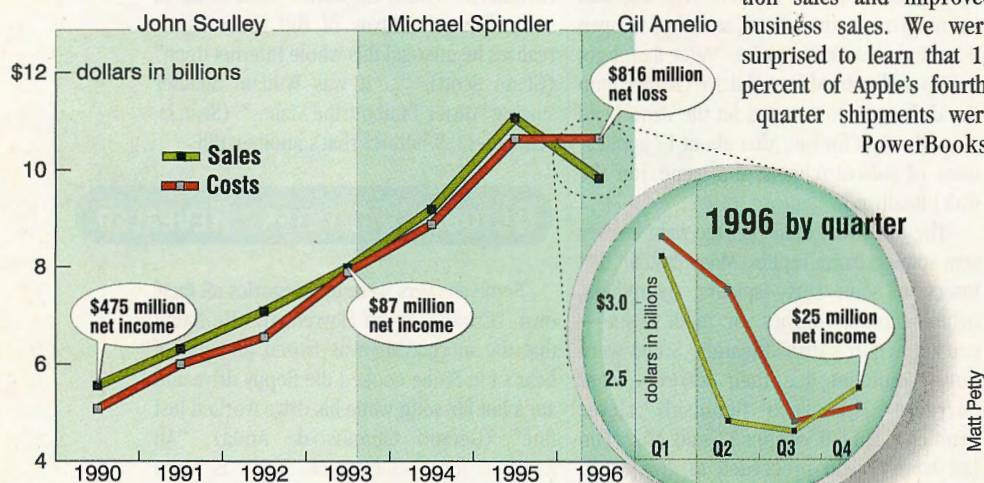
It's always fun to see analysts confounded. After an exceptionally rough year, with losses, rumors of buyouts, mainstream media hit pieces, and general gloom and doom, Apple's financial results for the fourth quarter of 1996 finally gave us diehard Mac boosters something we could wave in naysayers' faces. The \$25 million profit was all the sweeter because mere days before it was announced, the financial pros were predicting a loss in the tens of millions.

Apple's sales took a dramatic nosedive this year. Quarterly unit shipments—the number of individual Macs sold in each three-month interval—hit the 1 million

Amelio created a leaner, meaner Apple, streamlining the production process, spiking unprofitable sidelines, and reducing inventory.

Exciting as it was for long-suffering Mac loyalists, Apple's fourth-quarter profit was a close call, partly due to millions in unspent funds that had been set aside for restructuring costs. Amelio's cost-cutting brought the company to the break-even point, but Apple won't reach "sustainable" profitability until the second quarter of 1997. The first quarter is likely to be much like this one.

The trends are looking good. Unit shipments were up by 11 percent from the last quarter, with record-breaking K-12 education sales and improved business sales. We were surprised to learn that 15 percent of Apple's fourth-quarter shipments were PowerBooks.



THE APPLE OF MY EYE: Thanks to some serious bean counting, Apple is once again making a profit.

mark at the end of 1994 and climbed steadily to a peak of about 1.3 million in early 1996. Unit shipments then plunged, hovering at about 900,000 Macs per quarter through the rest of the year. The result? Apple's income dropped to its lowest level in two years.

When your income takes that kind of plunge, the only way to get back in the black is to cut costs. Under the leadership of Gil Amelio, Apple did just that, tightening its belt until it could live within its reduced means. Research-and-development spending hasn't been substantially reduced. Instead,

While Apple bashers were slamming this year's notebook line, the darned things were selling nonetheless.

Apple's profit margins are also up. After staying in the 24 to 29 percent range for a couple of years, margins began dropping late in 1995 and bottomed out at a dismal 9 percent in the second quarter of 1996, when the company racked up its record-breaking \$740 million loss. They've now rebounded, hitting the 22 percent mark this quarter, and Apple reckons it can stay at 20 percent or better for the foreseeable future. —MS

Performing Performas

When Apple promised to streamline the product line, it didn't mean that it was going to stop changing products but simply that it wasn't going to introduce a bazillion new models each based on a new design.

Case in point: Apple recently introduced the Performa 6360, which is the same as the Performa 6320, only faster. Whereas the Performa 6320 uses a 120MHz 603e processor, the Performa 6360 uses a 160MHz 603e processor. Both systems include 16MB of RAM, a 1.2GB hard drive, an 8X CD-ROM drive, and two PCI slots. The Performa 6320 with a 15-inch monitor costs \$1,899; the Performa 6360 sans monitor costs \$1,499. Apple has raised the speed of a popular Performa without raising its price.

In other news, Apple reduced prices on the recently introduced Performa 6400s. The 200MHz Performa 6400 dropped in price from \$2,799 to \$2,199, a savings of \$600. The 180MHz Performa 6400 went from \$2,399 to \$1,899, a savings of \$500.

Likewise, Apple increased speeds and dropped prices for some Macs sold into the education channel. The Power Mac 6400/200 now costs \$1,899, some \$300 less than the Performa version sold in retail outlets. Unlike its Performa 6400 twin, however, the Power Mac 6400 does not include bundled software, although you can purchase some software bundles for a drastically reduced cost. For example, a Writing and Publishing bundle that includes word processing, publishing, and reference tools costs \$100—not a bad deal. Finally, Apple upped the speed of the Power Mac 5400 to 180MHz and of the Power Mac 5260 to 120MHz. —CE

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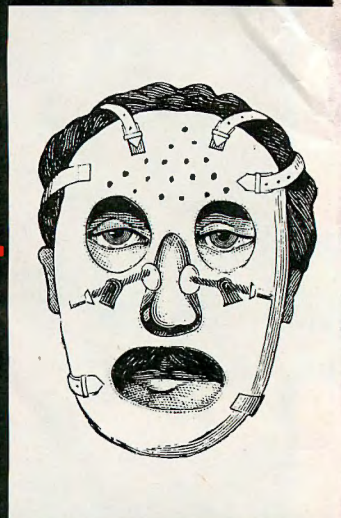
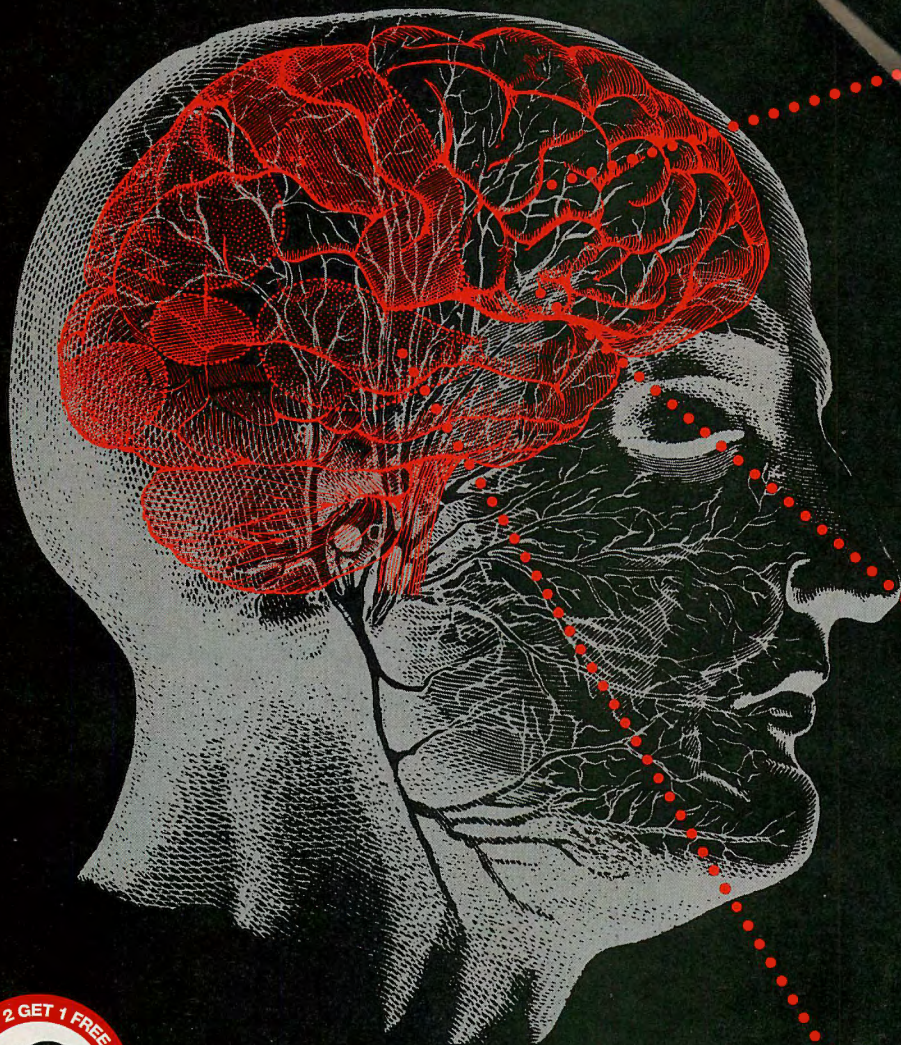
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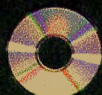
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IMPULSE-CONTROL DISORDER:



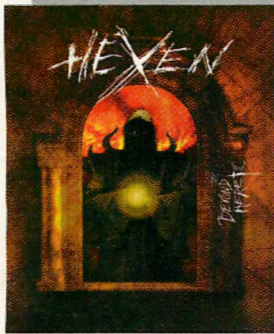
A.k.a- I'll do what I want, when I want. Here we see not just violence but ultra violence. This intense action thriller places the player in an evil futuristic dictatorship. Recommended treatment: straight jacket and a padded cell.

Episodes of failure to resist aggressive impulses that result in serious assaultive acts or destruction of property.



Pray you never see a case this bad. We're talking 3D, blastfest arcade action. Here the player/patient blows up virtually everything in sight in order to save the Earth. A frontal lobotomy may be in order.

ANTISOCIAL PERSONALITY DISORDER:



Perhaps the most disturbing issue here is that this is one of the best-selling games of 1995. In order to destroy the treacherous Serpent Rider the player must jump, fly, throw lightning bolts, or even cast evil spells. Physical restraint may be necessary.

A pattern of disregard for and violation of the rights of others.



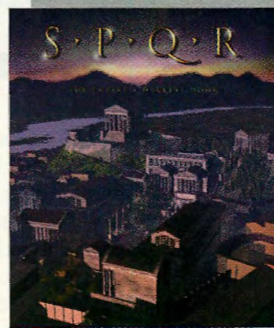
You don't get any more antisocial than this. Non-stop, shoot em-up action with beefed-up graphics and sound that help you blow away demons like never before. Treat with extensive psychotherapy.

DISSOCIATIVE FUGUE: (FORMERLY PSYCHOGENIC FUGUE)



The player is off to the barren artistic retreat of a late eccentric designer, where they must restore the resort to its original grandeur, solving brain-numbing puzzles along the way. The players could be gone for months at a time.

Sudden, unexpected travel away from home or one's customary place of work, with inability to recall one's past.



This is an extreme case. The player not only travels to another place but also to another time. (Ancient Rome, 205 A.D.) An evil plot to destroy the empire is underway and the player must stop it. These people are beyond help.



cravings

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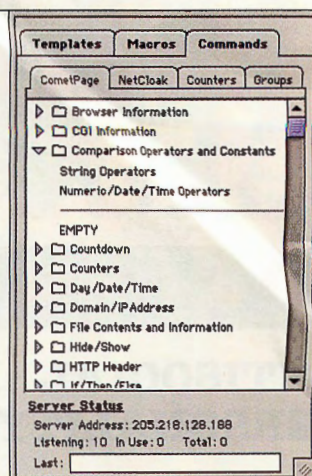
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Apple Computer



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PRINT PHOTOS SO REALISTIC IT'S SPOOKY.

TelePort Speakerphone Edition

Global Village

Who knew that George Jetson was on the design team at Global Village Communication? You can see his sure, three-fingered hands at work in the new TelePort Speakerphone Edition modem. Notice the parallel horizontal speaker grid lines, the slightly curved, tetrahedron-like form, the pastel gray rounded base. Pure Jetson. The

THIS CRAVING HAS NO AFFILIATION WITH HANNA-BARBERA.

TelePort not only looks like something out of "The Jetsons," it performs like it as well. Data

blazes through at 33.6Kbps, faxes fly across copper and fiber-optic lines, and the modem acts as a standalone speakerphone even when your Mac isn't on. Your family and friends will finally have to believe you when Elroy calls, because they'll be able hear his voice, too. Or at least see his incessant faxes. To take a leap into the Hanna-Barbera realm, call Global Village at 800-732-4821, or surf to <http://www.globalvillage.com>, and have your \$269 ready.



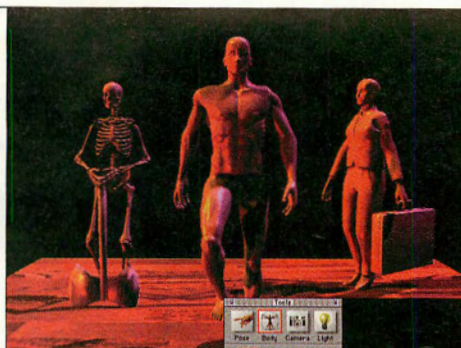
Poser 2

Fractal Design

Fractal Design's newest version of Poser has tasted from the Tree of Knowledge. The figures, formerly nude, now wear clothing (although it's difficult to know what they're so modest about, given they aren't quite anatomically correct). The crunchy bites of apple have done well by the rest of Poser. Figures can now be animated, props can be added, and for a

THE GENESIS OF GREAT FIGURES.

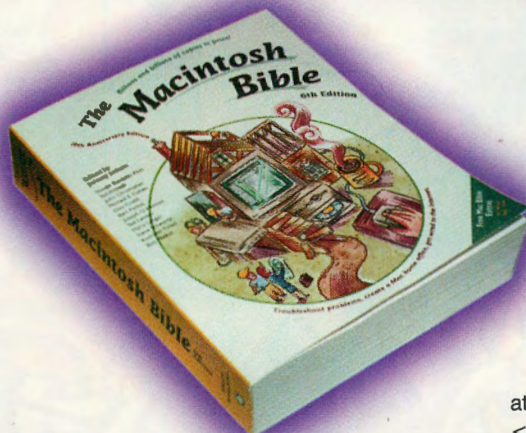
particularly surreal journey, 3D models can be substituted for body parts (here's your chance to do Edward Scissorhands one better, something like Bill Lamphead or Sue Keyboardfoot). Poser 2 also includes a group of Viewpoint Datalabs' figure models to get you started. For \$249, you too can be banned from the Garden of Eden and clothe figures to your heart's content. Contact Fractal at 800-297-2665 or <<http://www.fractal.com>> for more information.



cravings

The Macintosh Bible

Peachpit Press



Imagine having the foremost Macintosh experts in your house at all hours, available at your slightest whim to answer your questions. You won't have to break those pesky federal stalking and kidnapping laws, and even though they fit into a space smaller than your average Macintosh, you won't have to invest in Mr. Popeil's dehydrator/compactor to get them to fit on your bookshelf. Instead, invest \$29.95 in a **INFORMATIVE AND FBI-FREE.** copy of "The Macintosh Bible," 6th

Edition, to get the latest on troubleshooting, accessing the Internet, games, and so very much more. As an added bonus, the FBI won't come knocking on your door after you've been linked to several missing persons reports. To get your copy, call Peachpit Press at 800-283-9444, or browse your way over to <<http://www.peachpit.com>>.

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Home Automation Systems

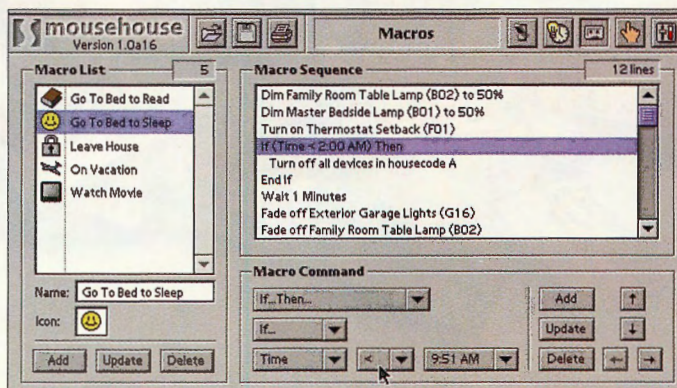
You've always envied Bruce Wayne and his spiffy Bat Cave with all the gadgets, but you can't seem to afford the same kind of lifestyle as that slightly off-kilter comic hero (especially after that spectacular homemade Bat Jet failure). Don't throw in the cape yet, true believer. For a mere \$34.95 for the X10 Powerhouse CP290 Home Automation Interface and an additional \$69.95 for the

Mousehouse

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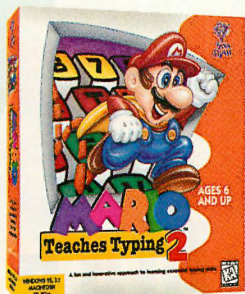
will be on your way to a fully automated, Bat Cave-like home. Oh, sure, your spouse may leave you, but you'll be able to use any X10 home control device with your interface. Have your living room light and TV turn on when you open the garage door, find out how much rain has fallen in the last half hour, or sic the ReX-10 Barking Dog Alarm (\$49.95) on an unsuspecting visitor. Who needs Alfred when you have the Powerhouse? Call Home Automation Systems at 800-762-7846 or go to <<http://www.smarthome.com>> for more information.



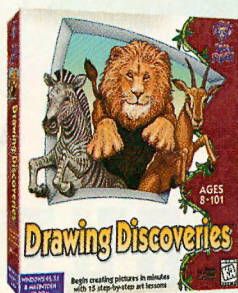
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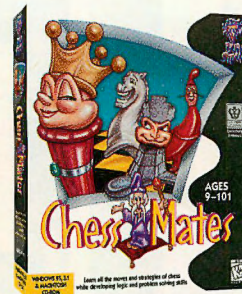
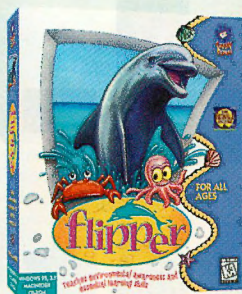
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hack

Hack Your Mac

BY STEFAN ANTHONY

hacker: originally, someone who creates furniture with an axe. Now, one who enjoys the challenge of circumventing limitations. One who can't leave well enough alone.

The Mac is touted as the easiest computer to use, but we bet you didn't know that its ease of use extended to munging its innards, too. Although using the following techniques won't make you a good enough programmer to

get the Mac OS 8 out on time, you will be able to customize programs, search game files for clues, and impress your friends with your cleverness.

For each file on your hard drive, the Mac operating system stores information in two places: the data fork and the resource fork. The data fork is where word processors save raw text, for

example, whereas the resource fork is where the system keeps the computer code and information about the interface: menus, windows, icons. To the Mac hacker, the most important difference between the data fork and resource fork is

that the resource fork can be edited to customize a program's interface and functionality, but the data fork can usually be edited only by certain programs. For instance, we'll let GraphicConverter read and edit image files rather than write those files ourselves one bit at a time. What this really means is that it's relatively easy for nonprogrammers—ahem, normal people—to change the resource part of a file.



Illustration by
Bruce Heavin

You can change the resource part of a file either by using a general resource editor such as ResEdit or Resorcerer, or by using a program whose sole reason for existing is to edit another program's resources. If you're already feeling a little faint, skip to "Other Resources" p43, to add a Windows menu to the Finder or custom directories to Netscape Navigator.

Probably the best part of using ResEdit or Resorcerer is that you don't need to be a programmer to use it—just drag a file onto its icon in the Finder, double-click a resource in the document window, and start hacking away. However, editing the wrong part of the wrong resource can cause some serious problems. You may have heard horror stories about what those "serious problems" are—unbootable disks, lost work, and damaged System files—but following two rules can help you avoid all that.

Rule 1: Before editing a file in ResEdit, always make a backup of the file and keep it close by in case you irreparably damage the file while working on it. It's a good idea to keep the backup in another folder just in case you accidentally start editing the wrong copy (believe it or not, it can happen not only to the ResEdit novice but also to a resource editing veteran).

Rule 2: Read Rule 1 until you see command-D behind your eyelids. A corollary to Rule 1 is that when working with the Finder or System, you need to work on a copy because those files are always open. After you make your changes to the copies, drag the originals out of the System Folder to the desktop, replace them with the changed versions, and then restart.

MESSING WITH MENUS ▶



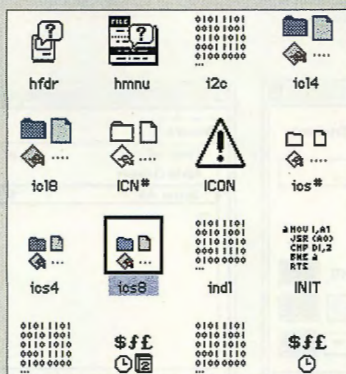
Low that you have a copy of ResEdit (if you don't have it, you can find it on The Disc), what do you do with it?

Let's start out simply by changing the appearance of the System. As you may recall, back in the October 1996 issue ("How to Customize Icons," p76) we showed you how to edit folder icons. We made systemwide changes by pasting the icons into the Finder Preferences file. This works for

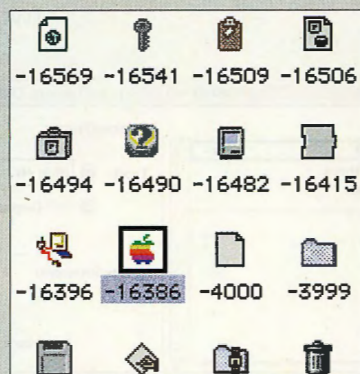
Finder items, but what about the Apple Menu, which is visible when any application is open? To make this kind of change, you'll have to edit your System file. This is the little guy that looks like a suitcase floating around in your System Folder. You probably shouldn't proceed unless you have the install disks for your System in case something goes wrong. But nothing will, if you follow these steps *exactly*.



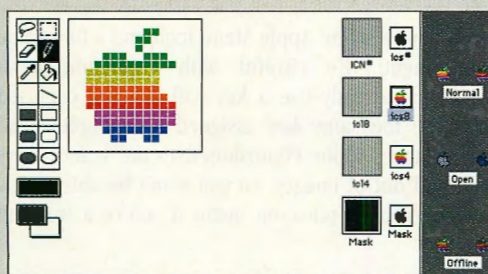
1 First, open up your System Folder, select the System file and duplicate it (command-D).



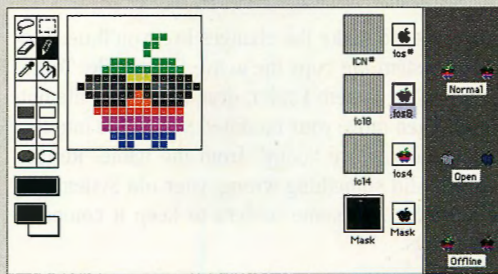
2 Drag the System file copy onto your ResEdit icon to open it. Then, open one of the ics files (ics8, ics4, ics#).



3 Scroll down until you see -16386—that's the Apple Menu icon. Double-click it.



4 Now you can add sunglasses, like we did here, or substitute your own creation. To give the sunglasses a 3D look, we shaded each lens with a highlight and a shadow. Because all light on the Mac comes from the upper left-hand corner, that's where we put our highlight. If you change the outline of the apple, be sure to edit the mask, or the pixels won't show up.



5 If you want to use these sunglasses, open the sunglasses.rsrc file on The Disc, and paste those resources into your System file copy. Save your work, and while you've got that System file copy open, we'll venture into a new resource type: menus.



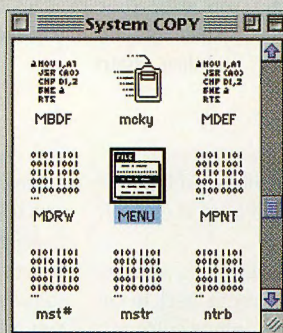
FIND THE SHAREWARE mentioned on The Disc.

ADDING SHORTCUTS

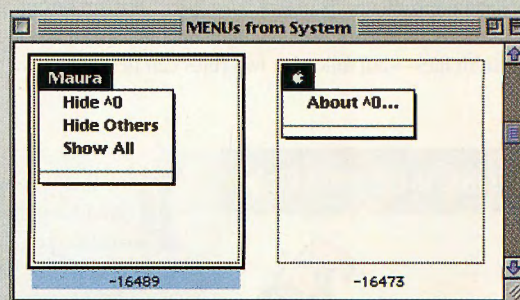
Menu resources keep track of the menus in the menu bar. Each of those menus has menu items, and each menu item has special characteristics. The one we're most interested in is the shortcut. Pressing the command key and the shortcut yields the same effect in a program as selecting the menu item. Sometimes, though, the designers of a program don't add shortcuts for all their commands. You can fix this by editing the "MENU" resource.



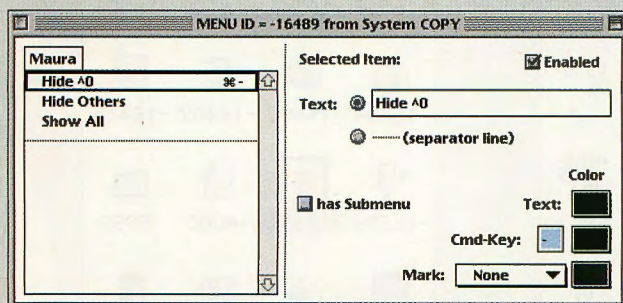
1 We'll add command keys to the System's application menu (the one on the far right).



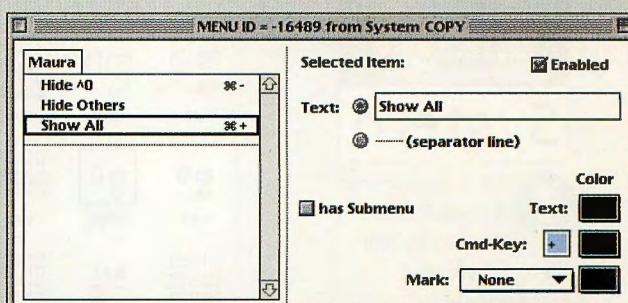
2 If you already have your System file copy open, scroll down to the "MENU" resource. If not, follow the steps in "Messing With Menus" to make a copy of your system.



3 Open menu -16489—aka Maura. (We don't know why it's called the Maura menu; maybe it's the name of the Apple engineer who made this menu.)



4 Select the Hide ^O menu item. In the box next to Cmd-Key, type a minus sign (-). Now the command shortcut for Hide/Show ^O is "-".



5 Select the Show All menu item. In the box next to Cmd-Key, type a plus sign (+). Now the command shortcut for Hide/Show All menu item is "+".

Save your work. To make the changes live, you'll need to make your System file copy the active System file. To do this, go into your System Folder, drag the System file out to the desktop. Then move your modified System file into the System Folder and remove "copy" from the name. Restart your Mac. If you did something wrong, your old System file will create a Finder and some folders to keep it company while you fix things.

Now you have a stylin' Apple Menu icon and a functional application menu. Be careful with command keys. Applications that already use a key will become confused when you have the same key assigned to multiple menu items. For instance, Adobe Photoshop uses the + and - keys to zoom in and out of images, so you won't be able to use those keys for your application menu if you're a frequent Photoshop user.

With a Color QuickCam and Videophone 2.0 from Connectix!

486F 6F72 6179 2120 596F 7527 7665 2064 6563 6F64 6564 2074 6865
2068 6578 2120 5365 6E64 2074 6865 2073 6563 7265 7420 636F 6465 2022
636C 6F77 6E20 6172 6F75 6E64 2220 746F 2022 4865 7820 436F 6E74 6573
7422 2C20 4D61 6341 6464 6963 742C 2031 3530 204E 6F72 7468 2048 696C
6C20 4472 2E20 4272 6973 6261 6E65 2C20 4341 2039 3430 3035 2077 6974
6820 796F 7572 206E 616D 6520 616E 6420 6164 6472 6573 732C 206F 7220
656E 7465 7220 6974 206F 6E20 6F75 7220 5765 6253 6974 652E

So far, editing files has been pretty easy; ResEdit has an interface for editing menus and icons. Finder menus, however, aren't "MENU" resources. They're special "fmnu" resources, and the regular "MENU" resource editor can't read them. We'll show you the hard way first, then the easy way (like logarithms in math are taught the long way, then you learn the easy way in calculus). To understand this, you'll need to understand hex (see "A Hex on Your House," p42).

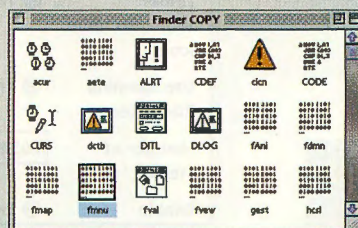
In the October issue, we showed you how to install custom icons in the Finder preferences. We told you that you needed to restart to see the changes. Because the Finder is an application like any other, you'd be able to see the changes immediately if there were a way to quit the Finder and relaunch it. You might also find a Quit command

for the Finder useful if your Finder Preferences file becomes corrupted (or you want to install icons into a new copy) and you don't want to have to restart or to give the 300K of memory to other applications—or if you simply want to impress your friends.

You can make the Finder quit without any resource editing. The easiest way is to use a script (provided that you have AppleScript installed). With the Script Editor, write and compile a script with the text "tell applications "Finder" to quit". Using AppleScript does work for this purpose, but it doesn't let you do other nifty things such as add key commands to existing menu items or add other functionality that would take more than one line of script to implement. Let's add a Quit command directly to the File menu with ResEdit.



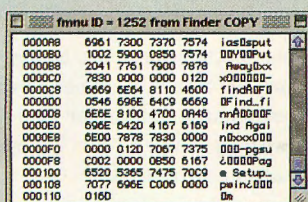
- 1 Make a copy of the Finder the same way you made a copy of the System.



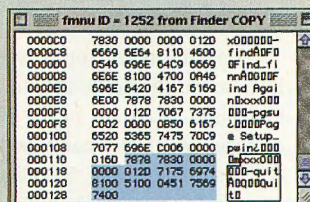
- 2 Scroll down to the "fmnu" resource. The "fmnu" can also be selected by typing the letters "fmnu" on the keyboard. Now open the "fmnu" resource by double-clicking it (or selecting the Open fmnu Picker command from the Resource menu).

ID	Size	Name
1251	34	
1252	274	
1253	150	
1254	18	
1255	146	
1256	112	
1276	108	
11030	122	
11031	42	
11032	78	
11034	54	

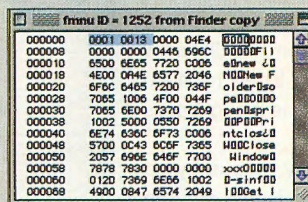
- 3 The File menu has the ID of 1252. Open it by double-clicking it while holding down the Option key (or by selecting Open Using Hex Editor from the Resource menu).



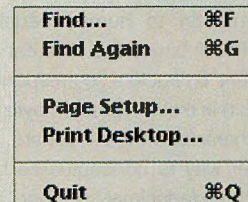
- 4 To understand this gibberish, see "A Hex on Your House," p42. Scrolling down to the very bottom shows the "fmnu" equivalent of the bottom of the File menu; there is the Page Setup... command.



- 5 Placing the cursor to the right of the 016D (in the second column), very carefully type 787878300000000012D7175697481005100045175697400—make sure to type all the characters exactly as written here. Typing the incorrect character won't be the end of the world, but it will most likely leave you with a broken Quit command and you'll have to start over.



- 6 Scroll back up to the very top. Change the 0001 0011 to 0001 0013—this tells the Finder that you've added two more items to the menu (you added not only a Quit command but also a divider line between Page Setup... and Quit). Save your work and quit ResEdit.



- 7 Now remove your active Finder from the System Folder (placing it in the Trash might work, but sometimes it doesn't and a blinking question mark appears at the next restart, so don't put the Finder in the Trash). Place the newly modified Finder into your System Folder, rename it Finder, then restart. Voilà! A Quit command the hard way.

An easier way to edit Finder menus than using hex is to use Stefan's Finder Menus, included on The Disc. Simply open this resource file, copy the contents, and paste them into your Finder copy. As you did earlier, place the newly modified Finder into your System Folder, rename it Finder, and then restart.

Now you can use a template to edit Finder menus. If ResEdit does not have a template to edit a type of resource, you can use one made by other programmers. They're stored in the—you guessed it—"TMPL" resource. Apple didn't include a template for the "fmnu" resource (we suppose the folks at Apple wanted to make it hard for you to accidentally mangle the Finder). To make it easier to edit the resource, Stefan's Finder Menus package includes a "fmnu" template. To use it, first make a new copy of the Finder, then open the template, and *then* open your Finder copy. Now ResEdit can read the template resource and it will know what to do with the "fmnu" resources.

A HEX ON YOUR HOUSE ▶

Let's step back for a moment and discuss what happens inside your Mac. Everything in a computer is either a one or a zero or a place to store ones and zeros. You can think of it as a huge bank of on/off switches. Nobody except hardware engineers can think in binary, so there's a whole host of ways to conceptualize that binary data. One on/off switch is a "bit." Eight bits in a row are a "byte" and can store 256 different positions. Now to convert that information to human-readable format, you can translate it from binary to a different system. ASCII text has 256 different characters, corresponding to each different combination in a byte. So each byte can be thought of as a different character on the keyboard.

Another way to conceptualize binary data is by converting it to hexadecimal code, or "hex." Hex is a number system that is comprised of 16 digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F. Because 16 times 16 is 256, a byte can be represented by two hex digits. So a lowercase "m" is 01101101 in binary, 6D in hex, and "m" in ASCII.

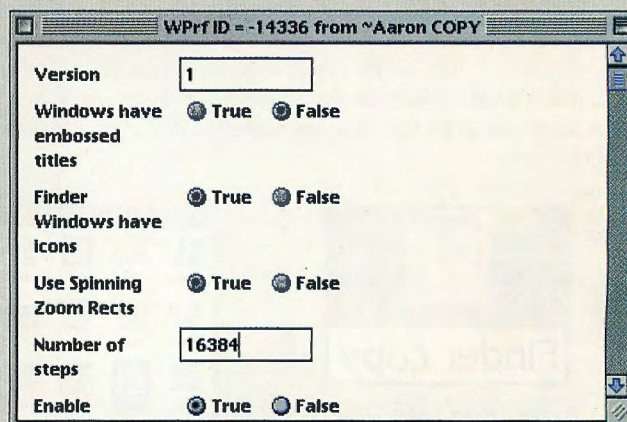
You need to know about hex because the editors for both the resource and data parts of a file use hex to display the contents of a file. Both ResEdit and Resorcerer display hex code in the middle of a file, with the corresponding ASCII text in the right-hand column. The numbers in the left-hand column tell you where you are in the file.

000000	5468	6973	2069	7320	This is
000008	6120	6865	7820	6564	a hex ed
000010	6974	6F72	2C20	796F	itor, yo
000018	7520	6361	6E20	7365	u can se
000020	6520	686F	7720	7468	e how th
000028	6520	6865	7820	7472	e hex tr
000030	616E	736C	6174	6573	anslates
000038	2074	6F20	4153	4349	to ASCI
000040	492E				I.
000048					



File Edit View Label C-Ya

We used a template from Stefan's Finder Menus to create new Finder menus, adding an "h" to the Edit menu, and putting "C-ya" in the Special menu's place. A word of warning: It's probably not a good idea to go changing menu names willy-nilly. Although most programs behave and ask for menu items by number, some actually refer to the name of the menu itself and would be horribly confused if you changed the menu names out from under them.



Without the templates in its resource fork, you'd never be able to make sense of the shareware extension Aaron's custom "SPrF" and "WPrF" resources. These resources control functions such as embossed text in title bars, WindowShade widgets, and spinning Zoom Rects.

The response to Aaron's spinning Zoom Rects was mixed—people either adored them or hated them. They're slow, distracting, and a waste of the computer's resources, but we at MacAddict love them! Here we're turning up the number of "steps" Aaron uses in its spinning from the default of 10... (you *really* don't want to do this unless you have a 10,000MHz Power Mac).

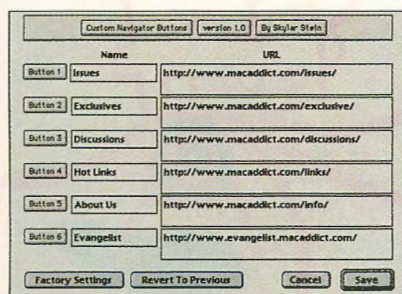
Congratulations! You're well on your way to being a Mac hacker. By now you should be able to edit icons and menus, and know how to replace resources in the System and Finder. Tune in for future episodes of "Hack Your Mac" when we'll show you how to size up SIZES, string together "STR#"s, and trade in the Trash. ■

Stefan Anthony enjoys walking the fine line between a stable system and the ultimate Mac as he charts the new world of resource editing. In his free time, he does Mac consulting, creates Web sites, and works on "ResEditTech," a newsletter about resource editing techniques he is currently developing.

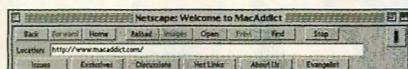
If the thought of mangling your Mac leaves you with sweaty palms and an erratic heartbeat, let someone else do the editing for you. These utilities will still change the way your Mac looks, but you don't have to get your hands dirty messing with the resources yourself. Essentially, these fine folks have produced interfaces for editing specific resources of other programs.

Custom Navigator Buttons

Custom Navigator Buttons is a freeware utility that edits the Directory Buttons which appear at the top of Netscape Navigator's browser windows (when "Show Directory Buttons" is selected in the Options menu, of course). It isn't easy to use ResEdit to edit different sections of the "STR#" resource and keep them in sync with each other.



CUSTOM NAVIGATOR BUTTONS' EDITOR is foolproof—on the left are the button names and on the right are the corresponding URLs.

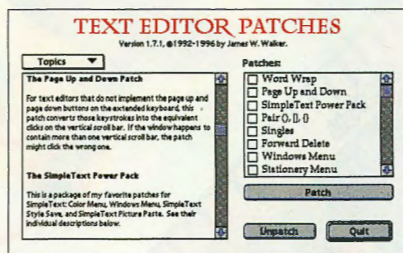


HERE WE'VE CUSTOMIZED NETSCAPE Navigator's buttons to take us directly to the main areas of our site on the World Wide Web.

Text Editor Patches

Text Editor Patches (TEP), from James W. Walker, isn't exactly an editor; it adds functionality to programs (usually text editors, as the name implies) by installing new code into them. For example, with TEP you can add a Windows menu to a program that doesn't have one, such as the Finder. Other patches allow pasting pictures into SimpleText files, add automatic word wrapping in text editors that don't have it, and enable the Page Up and

Page Down keys in editors that do not support them.



THE TEXT EDITOR PATCHES setup lets you choose just what to add.

Stickies Color Editor

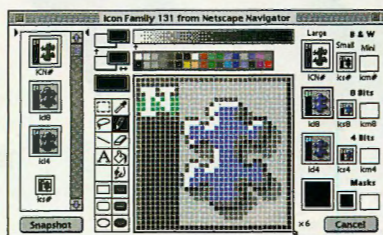
Stickies Color Editor gives Sticky notes alternate colors by editing Stickies' "colr" resources through a simple and uncomplicated interface.



AT MACADDICT WE TRY TO PUT PURPLE and green everywhere we can.

Resorcerer

Resorcerer is the preferred resource editor among many developers and power users because of its compact interface, extensibility, and powerful editors. Many of Resorcerer's features have no equivalent in ResEdit—the powerful Find command, for



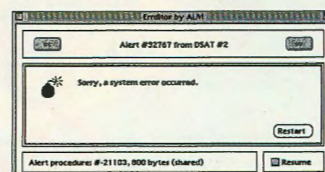
RESORCERER'S INDUSTRIAL-STRENGTH icon editor includes several tools not found in ResEdit: the Text and Smudge tools (and a Lasso tool that works!) as well as editors for the mini-icon resources.

example. Resorcerer is arguably the most powerful resource editor on the planet, but using it for the first time can certainly be an intimidating experience. Many people prefer ResEdit's more "visual" interface.

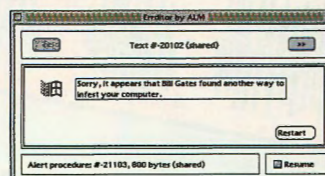
Errditor

The shareware Errditor provides an easy way to edit the "DSAT" resource found in the System file (and System Enabler files on some systems), which contains the system alerts such as "Welcome to Macintosh" and "Sorry, a system error occurred."

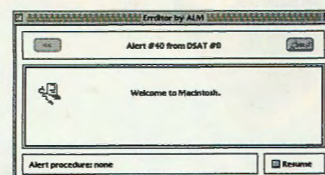
ResEdit can edit the "DSAT" resources, too, but Errditor replaces icons, changes the size and placement of icons and messages, and extends the normal limit of error messages to 256 characters.



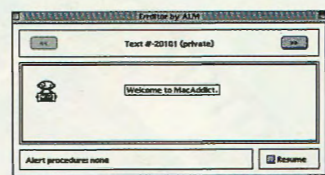
BEFORE ERRDITOR... it's terrifying isn't it?



AFTER USING Errditor, the message is still as terrifying as the original alert (OK, it is more terrifying), but at least we know the cause of the problem.

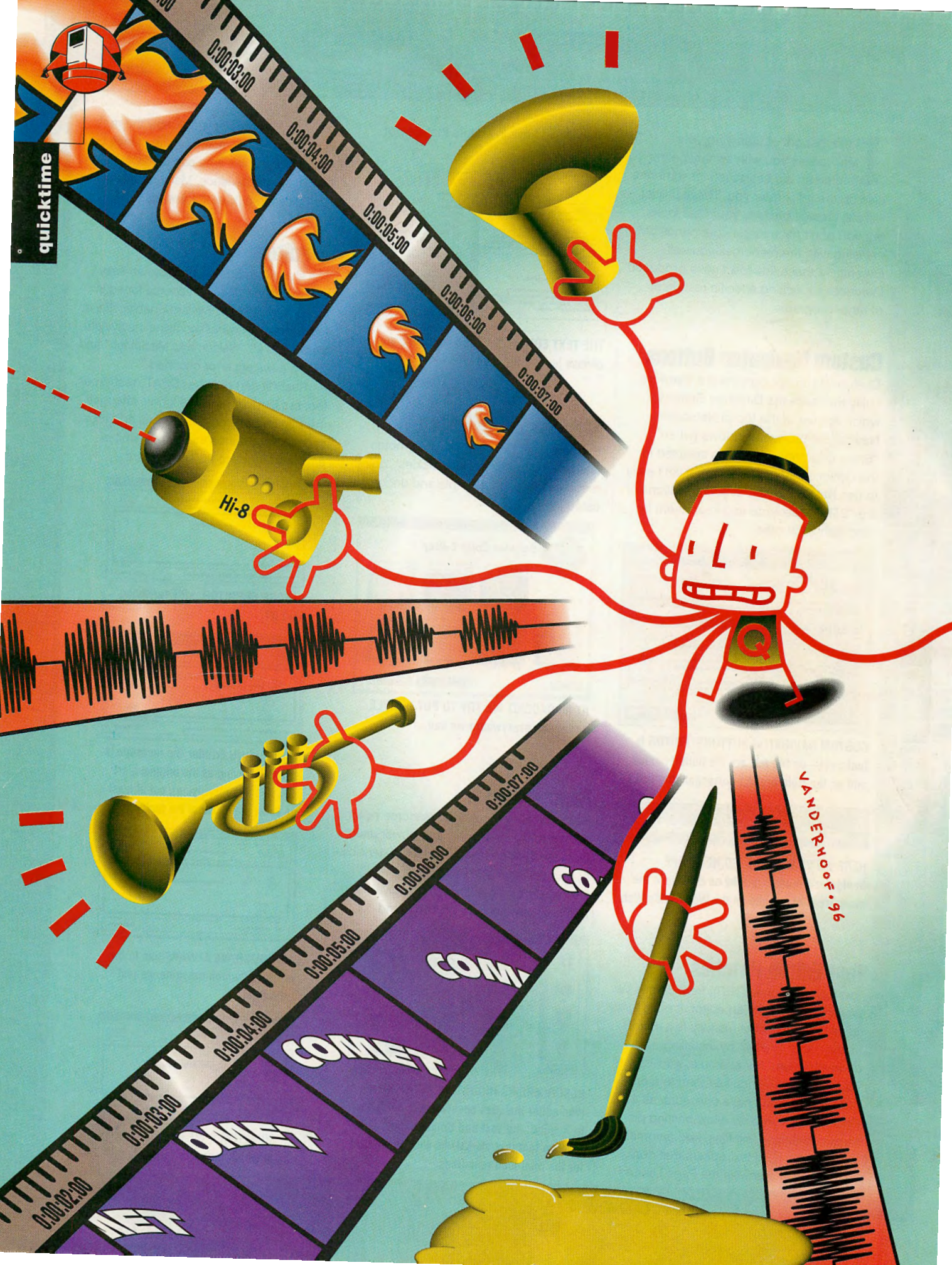


ALTHOUGH WE ALWAYS like to be reminded which machine we just turned on...



... SOMETIMES WE need reminding as to which magazine we belong!

quicktime

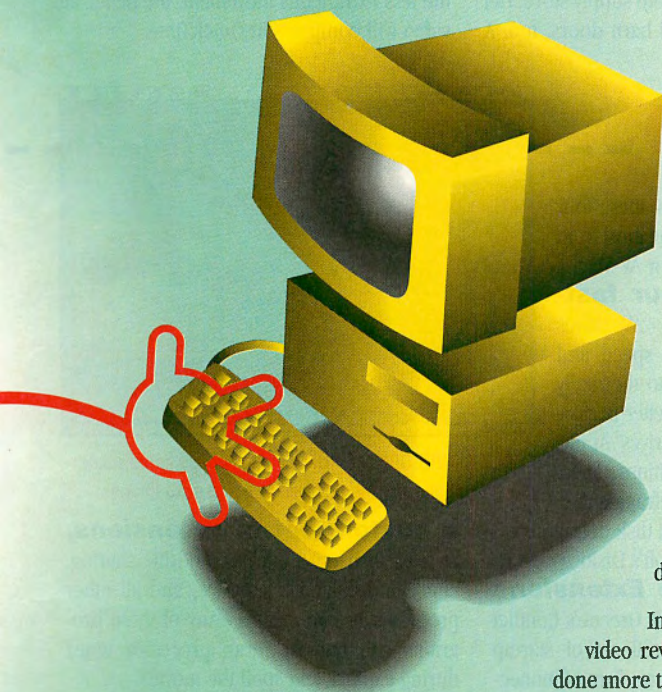


VANDERHOOF.96

QuickTime Home Studio

by Steven Anzovin

quicktime



You can keep your Cyberdog, your OpenDoc, your Mac OS 8. For my money, QuickTime, Apple's system software for handling video, sound, and other multimedia, is nothing less than the coolest Mac code on the planet. What's impressive about QuickTime is that it supports incredibly diverse data types—including video, sound, graphics, animation, text, music/MIDI, MPEG, sprite 3D, and QuickDraw 3D—with the ability to synchronize everything to the same time base and make it all play together seamlessly. And it does so on Windows, too. Best of all, QuickTime is free. It ships with every new Mac, and Apple gives it away to everybody else. Developers can license and distribute it for nothing.

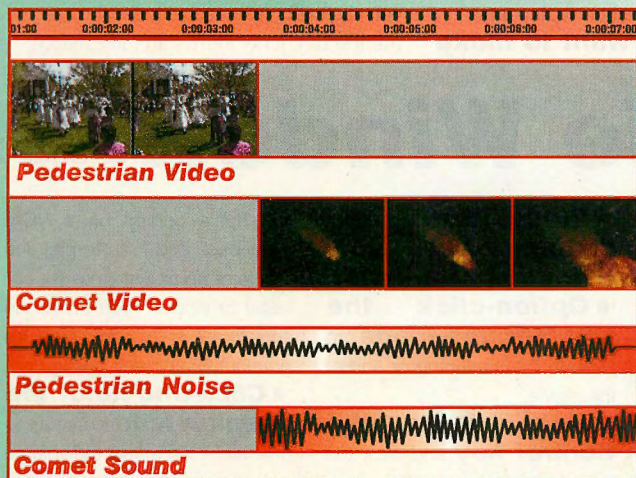
In short, QuickTime is one of Apple's few unqualified successes. The desktop video revolution would have fizzled long ago without it. QuickTime has probably done more to save Cupertino's butt than anything else since the original LaserWriter. QuickTime is actually a suite of system extensions that reside in the Extensions folder in your System Folder. The main QuickTime extension is the part everyone needs; the latest

version is 2.5. QuickTime Power Plug provides essential QuickTime acceleration for Power Macs; it's just excess baggage for 680x0 machines. QuickTime Musical Instruments contains a variety of high-quality MIDI instruments for playback of MIDI files; it's not absolutely essential but good to have—you never know when you'll want to play some MIDI sample off the World Wide Web.

You'll also want MoviePlayer 2.5, Apple's standard player utility, plus whatever plug-ins are available. Currently, there are three: two authoring-related plug-ins; Authoring and Goodies; and one for playing QuickTime VR movies. You'll find these plug-ins and QuickTime 2.5 on The Disc. Also, check out Apple's QuickTime home page on the Web at <http://www.quicktime.apple.com>. For the latest QuickTime goodies, info, tricks, and tips, try <http://www.quicktimefaq.org>, the home page for Apple's QuickTime evangelist, Charles Witgen.

Curious? Want to make your own QuickTime movie? All you need is a camcorder, a video capture board or a Mac with built-in audiovisual (AV) capabilities, some inexpensive shareware, and a little QuickTime savvy. If you'll provide the ware, we'll provide the know-how, as we step you through making your first digital video blockbuster.

Anatomy of a Construction Window



MIX AND MATCH MULTIPLE VIDEO CLIPS and multiple sound clips to create your own movies. It's easy! It's fun! It's Mac!



**FIND
DEMOS and
QuickTime
software on
The Disc.**

Step 1: Shoot

quicktime

Shooting video for QuickTime is not like shooting for television. When your movie is compressed, every bit of video noise is magnified and shoehorned into a little window where details vanish. For the best results, shoot with the very best camcorder you can find, use the best lighting you can arrange, and compose the video in simple, easy-to-see compositions. Here's what you need to know:

• **Camcorder:** Prosumer S-VHS or Hi8 models yield the best video, with less noise, better color, and sharper detail. Hi8 offers a slight edge over S-VHS. The new digital camcorders produce even better video quality, but they are expensive (\$4,000 and

up), and currently none provide a direct way to send a digital video stream into your Mac. If all you have is a clunky old VHS-C camcorder, go borrow your friend's Sony. The essential goal is to reduce video noise, which adversely affects the compression process (see below).

• **Lighting:** You can shoot outdoors without lights, but indoors even the brightest area needs additional lighting to reduce video noise. If you want high-quality video, your best bet is to buy, borrow, or rent at least one (preferably three) halogen video lights from a video or photo supply store. Get the stand, umbrella, and barn doors, too. A

lower-cost alternative for close-in work is to scrounge some halogen gooseneck office lamps; sheets of white cardboard make usable reflectors.

• **Composition:** Keep that camera still! Most people move it too much and too fast, which is one reason (though not the only one) why watching home movies makes many people feel nauseated. Use a tripod. Plan necessary camera moves carefully and execute them smoothly. Also, look for simple backgrounds and clean compositions with one main subject. The simpler the image, and the less extraneous movement, the better the video will compress in QuickTime.

Step 2: Capture

Now that you've got your video on tape, you need to get it into your Mac. You need an AV Mac with built-in video-in or a video capture board such as Apple's Avid Cinema, the miroMotion DC20 (miro, 415-855-0955), or the Xclaim VR (ATI, 905-882-2600). The basic procedure is as follows:

1. Hook up the camcorder's video-out to the video-in on the capture hardware in your Mac using the cable that came with your camcorder.
2. Launch the digitizing software.
3. Set the software to video preview mode and roll the video on your camcorder until you see the beginning of the footage in the preview window.
4. Capture the video.
5. Save it as a QuickTime movie.

Whatever capture hardware you're using, you may find that your movies drop more frames than a clumsy optician. The video hardware may not necessarily be at fault; your Mac may be the source of the trouble.

Before you digitize, follow these four recommendations to get the most from any movie capture board or AV Mac.

• **Capture to your fastest hard drive.** AV drives

(which run at a higher speed and don't pause periodically to thermally recalibrate) yield much better performance than the poky drives Apple puts in most of its machines. Keep that drive empty and defragment it often, using a commercial disk defragmentation program such as ALSoft's DiskExpress II.

• **Use the Apple Extensions Manager** or Casady & Greene's Conflict Catcher to create a special set of startup extensions for movie capture. Turn off unnecessary inits except for QuickTime and any extensions used by the video capture hardware. Then restart with the stripped-down set. You'll see a definite improvement in data capture rate, not to mention startup time.

• **If you don't want to make**



APPLE'S AVID CINEMA offers a super-easy capture interface—just plug-in the video source and grab images.

a custom set of extensions, at least turn off AppleTalk and file sharing, clock and calendar software, and all other programs before capture. Any of these programs can butt in (grab processor time) during capture and spoil the movie.

• **If all else fails,** maybe you're simply expecting too much from your Mac. Try capturing at a smaller frame size (320 x 240 pixels instead of 640 x 480). Or decide you actually like the effect of dropped frames. Hey, jerky movies are, like, funky!

Secrets of the Movie Window

The familiar QuickTime movie window has more hidden surprises than a case full of CrackerJacks. Wow your pals with this QuickTime legerdemain:

• **The Return key** and the space bar both start and stop playback.

• **Double-click the movie window** to begin playback; single-click a playing movie to stop.

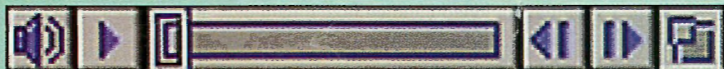
• **Press Shift and double-click** the window to play a movie backward.

• **Option-click the single-frame icons** to jump to the beginning or end of the movie.

• **Hold down the Control key** and click the single-frame icons. They turn into a variable-speed "scrub" widget that functions like the

jog-shuttle control on a VCR. Drag back and forth to play the movie at up to five times (or so) faster or slower—you'll hear the soundtrack at the same time. It's great for finding edit points.

• **Click-and-hold the speaker icon** to see a volume slider. Or adjust the volume with the up- and down-arrow keys. Option-click the speaker icon to turn muting on and off.



SHIFT-, OPTION-, AND COMMAND-clicking on these widgets opens a world of movie window tricks.

Frames Explained

QuickTime videos are made up of a series of sequential pictures, called frames, that are projected at your eyes so fast that you don't see the individual pictures, only smooth motion. The frame rate—the number of frames per second (fps)—determines how smoothly the movie runs. The standard North American video frame rate is 30 fps; a movie playing at that rate looks very smooth. As the frame rate drops, the movie plays less smoothly, until at less than 10 fps or so, it looks

more like an animated slide show than a video clip.

In the illustration, you can see the difference between a movie with a low frame rate (top) and one with a higher frame rate (bottom). The bottom strip breaks down the action in the first two frames of the upper strip into smaller increments, providing smoother playback.

So why not always make movies at 30 fps? Two reasons: One, no matter what the manufacturer claims, your capture hardware may not be able to grab a full 30 fps from incoming

video. Two, most slower Macs can't play back a 30-fps movie at the larger movie sizes (320 x 200 pixels and larger) without lots of compression.

When the QuickTime stream is more than your Mac can handle, the movie will drop frames, stutter, pause, lurch forward, and generally play poorly. If you are having this problem, or suspect that your audience might, set your capture software, or your editing program, to make movies at a lower number of frames per second.

You'll also want to know about key frames. The standard QuickTime compression dialog box provides a place to enter the number of key frames per second. All this means is that you tell QuickTime to be sure to play those frames and to preserve their quality as much as possible. The more key frames you set (for example, the lower the number in the Compression Settings dialog box), the fewer frames your movie will drop—but the video may play more slowly overall.

quicktime



IN THIS SIMULATION, the bottom movie has more frames per second and plays more smoothly than does the upper strip.

Step 3: Compress

Boggle your mind with this: A second of 640-x-480-pixel (the size of a 13" monitor), 24-bit color digital video requires about 25MB of hard disk storage. A mere minute of video eats 1.5GB. Want to digitize a two-hour feature film? Hope you have 180GB handy. And imagine how that 180GB movie will play; a dead slug moves faster.

That's why QuickTime compression was invented. QuickTime compression/decompression algorithms (codecs) are plug-ins that squeeze a movie so it takes less disk space; they also improve the movie's data rate, enabling it to play faster. The trade-off is, the more you compress, the lousier the movie looks and sounds, because codecs work their magic mainly by throwing away as much of the video and audio data as they can get away with. The trick is to find the right balance between playability and quality.

Experiment with the compression possibilities in your video capture and editing software. All capture boards have their own compression software that you must use to get the best results when playing the movie back through the capture board. If you're squeezing a movie for playback elsewhere,

use the Cinepak compression codec that comes with your video software. Cinepak lets you play movies back at very good frame rates; it drops fewer frames during compression than most other codecs. (Note, however, that MoviePlayer does not include Cinepak).

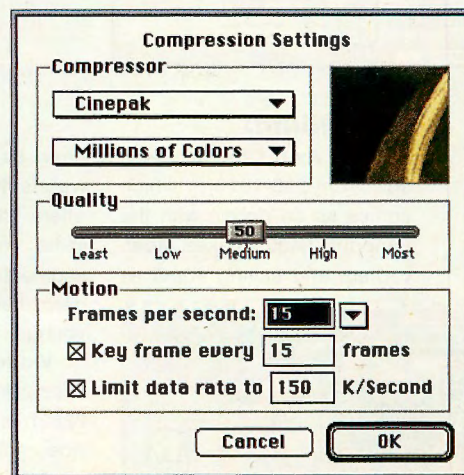
Cinepak doesn't make your movie look its best—at higher Cinepak compression settings, it will acquire ugly compression artifacts such as blurry patches, especially if the video is noisy (which is why shooting clean video is so important). The upside is that Cinepak-compressed movies play well on most Macs, even older, slower ones. To get the most out of Cinepak, keep these tips in mind:

- **Set the frame rate to divide evenly into 30,** even if the rate you choose is a little slower than your Mac can support. A setting of 15 fps will work better than 16; 10 fps is better than 12.

- **Cinepak compresses pixels in blocks of four,** so make the height and width of your movie evenly divisible by four. A movie that's 319 x 201 pixels won't compress as neatly as

one that's 320 x 200.

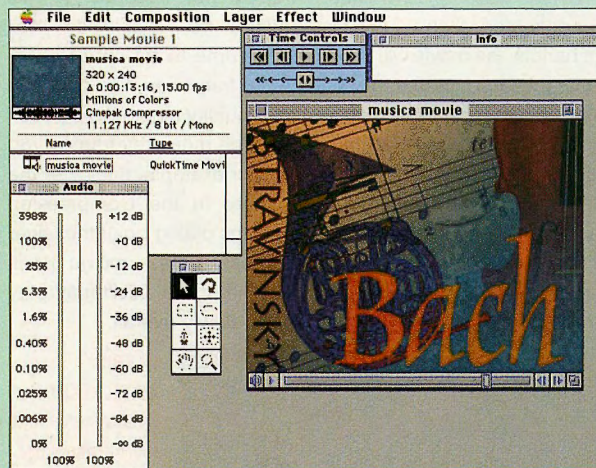
- **Try not to set the Quality rate below 50 percent.** Images turn nasty at lower numbers. Go to a smaller frame size instead.



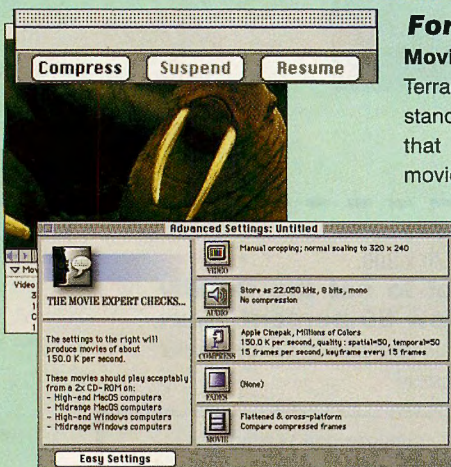
THE STANDARD QUICKTIME COMPRESSION dialog box lets you set the codec and view a preview at the top right. Here you can also set color depth, frames per second (30 fps is video standard, but 15 is better for most Macs), and other factors.

High-Powered Editing

For all its hidden powers, MoviePlayer is severely limited as a QuickTime editor and special-effects program. Pushing the QuickTime envelope to the extreme means you've got to have QuickTime software that can handle anything you throw at it. Here are our recommendations for your QuickTime toolbox:



ADOBE AFTER EFFECTS IS THE PRO'S CHOICE for video compositing and 2D special effects.



For compression:

Movie Cleaner Pro (\$129 srp) from Terran Interactive (408-353-8859) is a stand-alone compression application that has options for comparing movies before and after compression, cleaning up video noise and jaggies, applying custom palettes (for playback on 256-color machines), and batch processing. A no-frills version, **Movie Cleaner Lite**, is available as shareware.

MOVIE CLEANER PRO steps you through movie compression.

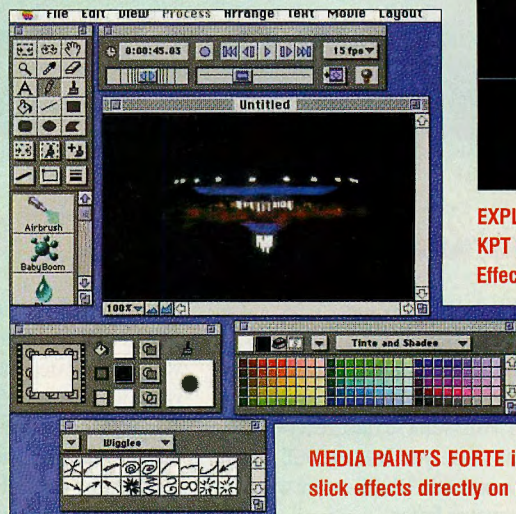
For movie compositing and special effects:

The pros swear by **Adobe After Effects 3.0** (Adobe, 800-833-6687). It's available in a \$995 (srp) standard version, which has all the tools you need to animate unlimited layers of video, and a \$1,995 (srp) production bundle with advanced extras such as motion control and special keying tools. Best feature: Text is always at the highest resolution, no matter how close you zoom in.

MediaPaint (\$695 srp) from Strata (800-678-7282) was designed specifically for painting special effects on QuickTime movies. It isn't as good as After Effects at sophisticated compositing, but it can generate lightning, particle animation, and

other special effects that After Effects can't touch.

KPT Final Effects (\$695 srp for Premiere; \$995 srp for After Effects from MetaTools (805-566-6200) is a suite of plug-ins for particle animation, distortions, slick transitions, and other special effects. Also look into KPT Studio Effects (\$695 srp), more After Effects plug-ins, including true 3D particles and liquid metal à la "Terminator 2."

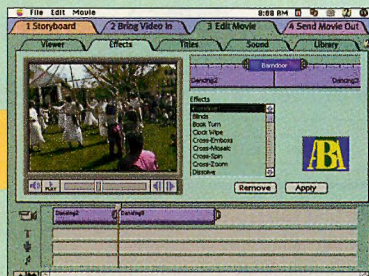


EXPLOSIONS?
KPT Final Effects has 'em.

MEDIA PAINT'S FORTE is painting slick effects directly on movies.

For editing:

Apple's Avid Cinema (\$459 srp, 408-996-1010), which comes as an option with the Performa 6400, makes video capture and editing about as



APPLE'S AVID CINEMA offers an easy, familiar, tabbed folder interface.

easy as it gets. The hardware/software combination offers story templates that invite you to capture video segments and then drag and drop them in place. Best for younger QuickTime artists.

Videoshop 3.0 (\$249 street) from Strata (800-678-7282) is a basic multitrack video editor that can do most of what you need. Pull together unlimited tracks of audio and video, insert transitions, and add text and titles. One strong feature: Videoshop has an After Effects-like canvas for

turning movie clips into path-based animation.

Adobe Premiere 4.2 (\$795 srp) from Adobe (800-833-6687) is top dog among QuickTime editors. It boasts more professional features than the others, and more third-party developers support it with eye- and ear-popping plug-ins. The downside: Premiere compilations are speedy—not! But if you're really serious about QuickTime

editing, Premiere is the program to get.



STRATA'S VIDEOSHOP is an all-around good value for video editing and effects.

Step 4: Edit

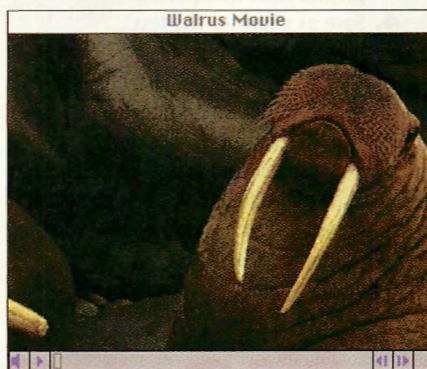
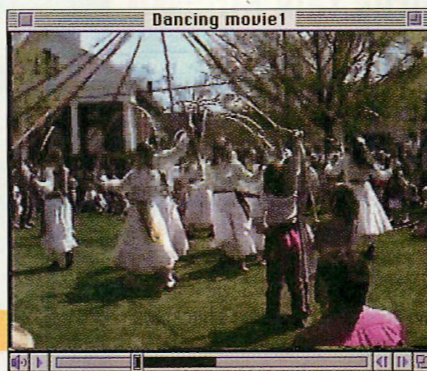
Any honest director will tell you that most of the real creative movie work goes on in the editing room. QuickTime movies can be edited just like film and video; in fact, QuickTime has capabilities film and video will never have such as 3D and VR tracks. But before you spring for one of the high-priced QuickTime editors such as Adobe Premiere or Strata Videoshop, note that Apple's MoviePlayer has a wealth of little-known editing abilities. Use these MoviePlayer tricks to hone your editing chops.

The main technique to learn is how to select a range of frames for editing.

1. Cue up the progress-bar marker at the first frame of your selection.
2. Shift-drag across the progress bar to select the desired range of frames. To select frames as the movie is playing, position the marker, press Shift, hit the space bar or Return key to start the movie, then release the Shift key to define the end point.
3. To check your selection, choose Play Selection Only from the Movie menu, then press command-M to play the selected frames. You can check the exact start and end times and duration of the selection by opening Get Info under the Movie Menu and choosing Time from the right-hand pop-up menu.
4. Click on the progress bar outside the selected area to clear the selection. With an extension of the same frame-range selection technique, you can trim unwanted footage from anywhere in your movie. Shift-drag to select the range of frames you want to cut, then hit the Delete key.

Say you want to insert footage from one movie into another. You can do that in MoviePlayer, too, faster and easier than in Videoshop or Premiere.

1. Open the two movies.
2. Shift-select the range of frames you want to use from Movie 1. Copy the selection to the Clipboard.
3. In Movie 2, place the progress-bar frame marker where you want the copied frames to begin. Or you can select a range of frames if you want the inserted frames from Movie 1 to paste over frames in Movie 2. This effect works best if both selected ranges are of the same duration.
4. Choose Paste from the Edit menu (or type command-V). The frames from Movie 1 will now play in Movie 2.



HAVING A WALRUS VISIT the May Day celebration is a snap with Apple's MoviePlayer.

5. Choose Save As from the File menu and select "Make movie self-contained" before you save. If you choose "Save normally," the footage you paste will not actually be included in Movie 2. Instead, MoviePlayer will just insert a marker that refers to the selected footage in Movie 1. To see the footage from Movie 1 when you play Movie 2, you'll need to have Movie 1 open at the same time, and Movie 2 will play more slowly overall.

How about mixing, matching, and editing QuickTime tracks, like the big QuickTime editors do? You can even do that, though not as conveniently or with as much control. Options in the Edit menu enable, disable, extract, and delete tracks that already exist in your movie. For example, you can extract the audio track and save it as a separate movie. You can also layer one movie on top of another for slick special effects, or build multiple tracks of audio for a complex soundtrack. For these more advanced functions, you'll need two plug-ins that come with MoviePlayer: Authoring and

Goodies. These options are available through the Get Info box. (Expect additional plug-ins to be available through Apple and third parties.)

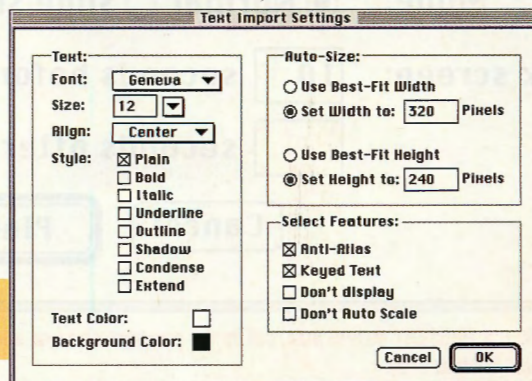
Here's how to add two more tracks—a second soundtrack and a subtitle text track—to your movie. The basic technique works for adding any kind of track, including video.

Add a second soundtrack for narration, music, or sound effects.

1. Open Movie 2 and the source for the second soundtrack. The source could be a QuickTime audio movie or a full QuickTime movie with the video channel disabled.
2. Shift-drag to select the frame range in Movie 2; do the same in the audio movie.
3. Copy the audio movie selection. Click on Movie 2. Press the Option key. In the Edit menu, Paste will be replaced by Add. Choose Add.
4. The sounds of the audio movie will be added to Movie 2 as a second audio track.
5. To adjust the volume of any soundtrack, choose Get Info from the Movie menu. Select the soundtrack from the left-hand pop-up menu, and choose Volume from the right-hand menu. Play the movie and drag the green volume bar back and forth to set the new volume level interactively. Setting the bar in the red area (more than 100 percent of the original volume) may result in distortion.

Adding subtitles to a QuickTime movie is also easy.

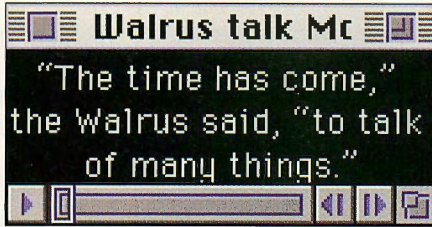
1. Type the text in any word processor and



TO MAKE A TEXT MOVIE, set the text import parameters here. Anti-Alias makes the text look smoother. Click the Keyed Text checkbox to make the text to "float" over the background movie.

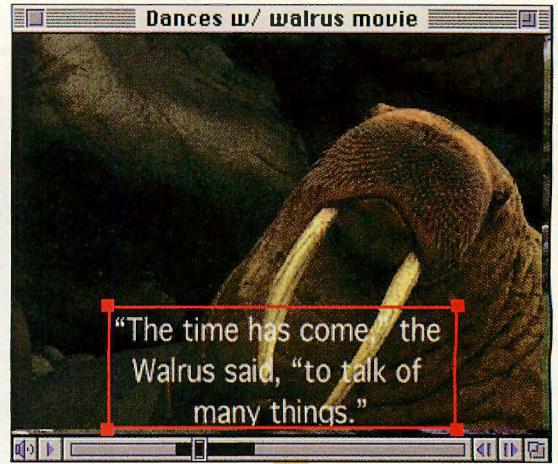
save it as a text-only (ASCII) file; a formatted word processing document won't work. Later, QuickTime will break up the text and allocate it to frames based on a built-in algorithm. QuickTime won't break the text in the middle of a word, but it may break it in the middle of a sentence. With a little experimentation, you can use the algorithm to create some neat effects—for example, create longer pauses by adding more returns between sentences.

2. In MoviePlayer, choose Import... from the File menu and select the text file.
3. Click the Option button to set parameters such as text style, text and background color, anti-aliasing, and whether you want MoviePlayer to autofit the text (recommended for best results). Also check



A TEXT MOVIE LOOKS LIKE THIS and is ready to use as a subtitle.

- the Keyed Text checkbox, which makes the background color transparent.
4. Save as a movie. The text now plays back as a series of perfectly laid-out text-only slides. Voilà! An instant teleprompter. Works great for credits, too.
5. Now use the Option-add procedure outlined above to add the new text track to Movie 2. The text will appear superimposed over the video.
6. You'll probably need to reposition and



ONCE YOU'VE OPTION-COPIED the text movie, resize it with the handles.

resize the text area. Open Get Info, select the Text track from the left-hand pop-up menu, and choose Size from the right-hand menu. Click the adjust button, then drag the highlighted text box where you want it. Resize it by dragging the corners. Click Done in the Get Info dialog box to complete the job.

Step 5: Nuke the Popcorn

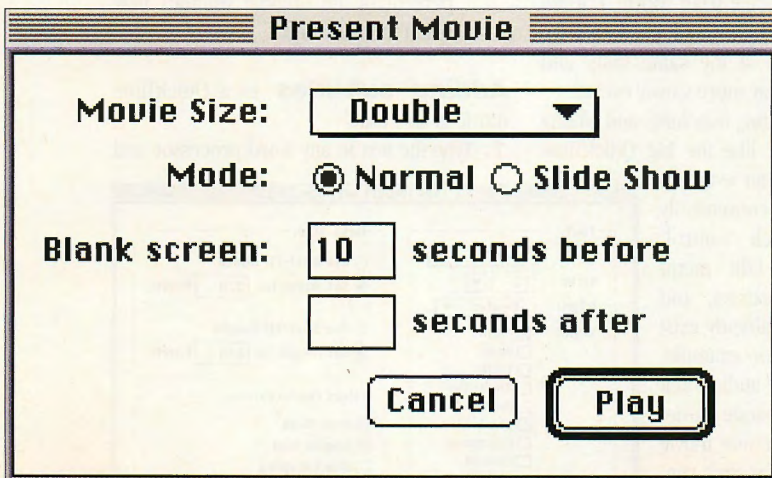
OK, time to start the show. Load your flick into MoviePlayer and choose Present Movie from the File menu (or type command-M). Your masterpiece will play without that annoying control bar. If you're showing it to a crowd, set the movie to play at double size in the Present Movie dialog box. Your movie will play somewhat more

slowly, but people standing back from the screen will see it better.

A final MoviePlayer trick: If you're using MoviePlayer to play a movie for output to video, set a delay that will give you time to cue up your VCR. In the Present Movie dialog box, set the Blank screen option to 10. That generates 10 seconds of black screen before

your movie begins—enough time for you to punch the Record button and settle back with a big bowl of Orville Redenbacher's. Don't forget the melted butter. ▣

Reformed guerrilla videographer Steven Anzovin still knows how to hand-thread the tape on an open-reel portable videotape recorder.



IN MOVIEPLAYER'S PRESENT MOVIE BOX, set up the playback size and add some black before playback. It's that easy.





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Evangelist

Facts, anecdotes and more from Guy Kawasaki's mailing list for Mac loyalists.

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We welcome your comments. Please visit our **feedback page** and tell us what's on your mind!

Monday, July 15, 1996 (7:15 PM)
What's going on in the Mac world today? Here are some highlights for the Web-surfing Mac fan...

➤ Our debut issue is already appearing on newsstands, well in advance of the anticipated July 23 debut. Keep your eyes peeled for it in your mailbox or at your local newsstand, and send your comments to our **letters department** when you get your hands on it!

➤ Our multimedia enhancement option and our **Epson PhotoPC contest** are now online, as promised in the magazine. You'll need the CD-ROM that comes with MacAddict to enjoy the one and to enter the other.

➤ **RAM Doubler 2** is due to ship on August 7, amid the hurry-burly of Macworld Boston. Promised enhancements to Connectix Corp.'s RAM booster include memory tripling, faster compression and a control panel from which you can fine-tune its settings.

Mac ADDICT

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sound

Things

QUACK!
QUACK!
QUACK!



BOING!
BOING!
BOING!

EEEP!
EEEP!
EEEP!
EEEP!

in the

go

BU

Mac!

It's a conventional wisdom in the movie business that visuals drive the story, but sounds provide the emotional punch. Think of "Star Wars" without John Williams's sweeping score or the ominous voice of Darth Vader, and you'll see what we mean. The same principle holds true off the silver screen,

too. A cool QuickTime movie needs cool sounds to make the maximum impact. In fact, all the tricks of movie-style sound scoring—from multitrack editing to CD-quality sound effects—can be recreated on your Mac with relatively inexpensive software. We'll take you step-by-step through some of the audio techniques we used to create a science fiction soundtrack for a 3D space battle animation.



FIND MANY of these sound programs and other utilities on The Disc.

mp

If you need more information or sample sounds to start your own projects, then the Web provides an abundance of audio resources. (You'll also find some sample sounds on The Disc included with this month's issue of MacAddict). You can find sound samples from popular TV shows, movies, and CDs. (Keep in mind that many of these samples are copyrighted, which means you can't use them in a commercial production without paying the creator. Personal use is generally OK.) Serious information on Mac sound editing is a little harder to come by but not impossible. Here are three of our favorite sound sites:

- <http://www.wavenet.com/%7Exgrindr/quimby4.html>

The Mac Sound Utilities page is the premiere location for Mac shareware sound utilities and hacks. Also publishes Sound Advice, an e-mail newsletter dedicated to all aspects of audio for the Mac.

- <http://www.nerdworld.com/users/dstein/nw166.html>

Part of the Nerd World net-publishing galaxy. Links to 10 zillion audio samples, from JFK, Martin Luther King Jr., and Malcolm X to Beavis and Butthead. Also links to music sites and to professional audio production pages, where you can soak up some useful tips.

- <http://www.cis.ohio-state.edu/hypertext/faq/usenet/AudioFAQ/top.html>
- Superthorough FAQs that cover general issues in sound and sound recording, from beginning to advanced, analog to digital. Not Mac-specific but a must-read for every budding soundmaster.

by Steven Anzovin and Raf Anzovin

The Sound Toolbox

The first step in any sound project is to assemble the tools you'll need. Foremost is a QuickTime video-editing program such as Adobe Premiere or Strata Videoshop (we used Premiere); that's where you'll assemble the final soundtrack. However, QuickTime editors don't offer much in the way of sophisticated audio processing, so you'll need a sound-editing program to record and create custom sounds. Bias's Peak 1.10, Opcode's Audioshop 2.1, and Macromedia's SoundEdit 16 2.0 are all capable programs; we chose SoundEdit 16, which has a wide range of tools.

A high-quality sound-effects collection is also essential. We picked g/matter's Earshot SFX Library for its wide variety of industrial and "mech" sounds, well-suited to sci-fi work. For batch processing of audio files and cleaning up sounds, WaveConvert is the only option. Finally, you may want to stay in your video editor as much as possible. Invision's CyberSound FX suite of audio filters puts much of the special-effects functionality of a standalone sound-editing program right into Premiere or Videoshop.

What about hardware and system

software? No special hardware is required to work with sound; any recent Mac with a mic input jack can handle the demands of high-quality audio editing. A Power Mac will obviously speed special-effects processing. AV Macs such as the Power Mac 8500 sport additional sound input and output capabilities that come in handy but are not essential. CD-quality sound files can be big, so you'll want a clear 100MB or more on your hard drive (or removable storage such as an Iomega Zip drive). Make sure you are using Sound Manager 3.1 or later, and QuickTime 2.1 or later.

Mic to Your Mac

Apple's PlainTalk microphone does an OK job of recording if you're not too picky about sound quality. But suppose you want higher-fidelity live recordings? Just about any microphone over \$30 records better sound than Apple's mic, but until recently, you couldn't plug one into your Mac's mic input, because audio-industry-standard 600-ohm, high-impedance mics need amplification and your Mac doesn't provide any. (The Apple PlainTalk microphone has its own mini pre-amp inside that boosts its output to "line" level.)

If you have a Mac 7200/90 and System 7.5.2, Apple has a solution for you: the Sound Input Amplification extension. Drop this in your System Folder and the Sound control panel acquires a new capability: to amplify the signal from a standard mic plugged into the mic input jack. Unfortunately, Sound Input Amplification doesn't currently work with any other setup.

A solution is a small pre-amp that boosts the standard mic level to the line level that your Mac requires. It's the same kind of pre-amp that's used to amplify the output of a phonograph needle (Radio Shack, special order, for less than \$30, part #10445161). Add another \$15 or so for a plug adapter to connect the mic cable to the pre-amp input, and a Y-cable with a stereo miniplug at one end and two RCA plugs at the other to connect the pre-amp outputs to your Mac's mic input jack.

Four other tricks for better recording:

- Reduce the Mac's recording level and raise the volume at the sound source; this will help eliminate noise introduced by your Mac.
- Move the mic away from hard-drive fans and other sources of background noise. Don't use a camcorder mic, which can pick up camcorder noise.
- Turn off fluorescent lights; these can introduce a hum into the recording.
- Record at 44kHz, 16-bit, or at the highest sampling rate and bit-depth available.

Anatomy of a Sound Editor

You can't craft great sound effects without a good sound-editing program. That's where you can work directly with the waveforms of sound, cutting and pasting sounds, applying effects filters, and adding, subtracting, and mixing tracks. Macromedia's SoundEdit has a long history of being the Mac sound editor of choice—let's look at how it works.

SOUNDEDIT, like other Macromedia programs, puts commonly used functions on toolbars. You can edit the toolbars to include only the functions you want, or turn them off entirely.

HERE'S WHERE THE REAL BUSINESS gets done—the waveform window. SoundEdit shows sound clips as a waveform (the black wiggly line) or as a spectrum (the colorful strip below the waveform). The high parts of the wave are called peaks and represent high-pitched sounds; the low parts are called troughs and represent low-pitched sounds. The distance from one peak to the next is known as a cycle. The range from the lowest trough to highest peak is the waveform's amplitude—its loudness; and the number of peaks per second is the sound's frequency, measured in hertz, or cycles per second. You can select, cut, and paste sections of the waveform; applying filters and effects changes the waveform's shape (and sound).

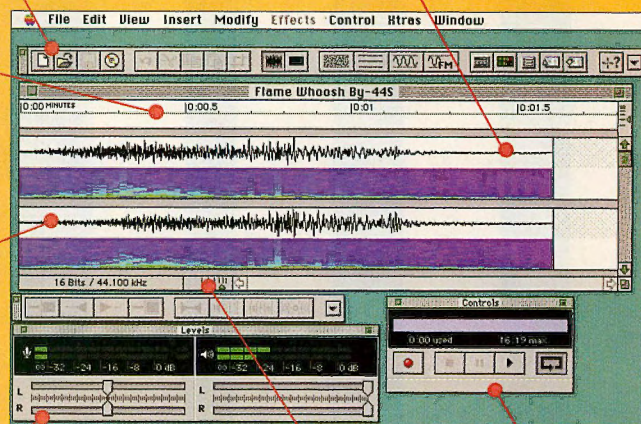
THE TIMESCALE shows you how long the sound is.

YOU CAN STACK multiple tracks of audio, as many deep as your RAM allows, then mix them down to create stereo or mono tracks.

LIKE THE LED VU METERS on an audiotape recorder, this window shows the loudness level of sound being recorded from a mic or audio CD, and the playback level of the current sound clip in the waveform window. When recording, make sure the colored bars stay green; yellow indicates clipping (loudness distortion).

ADJUST THE TIMESCALE of the waveform with this widget. The left end of the widget makes the timescale longer; the right end, shorter.

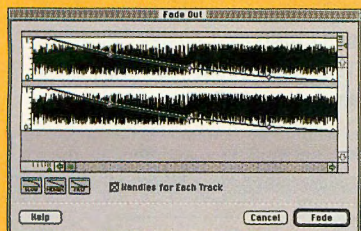
PLAY, RECORD, AND LOOP sounds with these tape-deck-style controls.



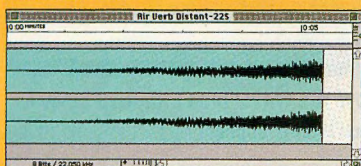
Warp Drive



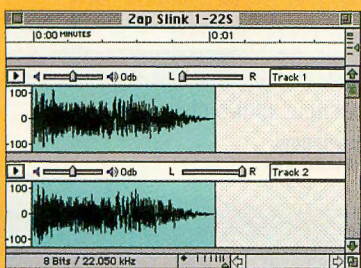
THE ORIGINAL WAVEFORM of the two-track (stereo) base clip.



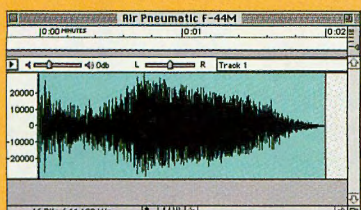
A FADE-OUT APPLIED with SoundEdit's Fade Out filter.



THE CLIP REVERSED so it builds from barely audible to loud.



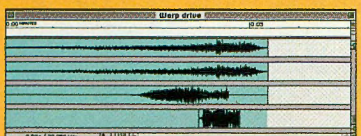
A BOINGY, slinky sound added at the end of each track.



A HISSING SOUND added.



THE CLIMAX of the sound anchored with a deep groan, actually the opening of a large valve.



ALL THE TRACKS of the effect before mix-down.

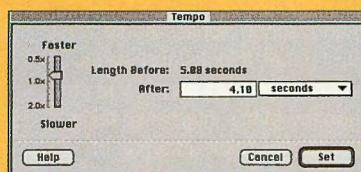
Special Effect 1: Warp Drive

Snazzy visuals call for truly special sound effects. In our movie, the warp-drive sequence needed an ear-catching, original effect that built to a quick sci-fi crescendo, but nothing in our clip sound collections really fit the bill. So we built our own in SoundEdit 16 out of several layers of clip sounds, then tailored it with distortions. Here's what we did:

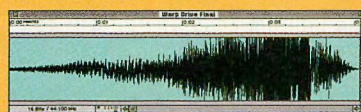
Step 1. Find a sound and then tweak it. We found a thundery air-valve sound that seemed the perfect foundation for our warp-drive effect, but the more interesting part of the noise was at the beginning, not the end. First we used SoundEdit 16's fade-out filter (in the Effects menu) to radically taper the sound at the end. Then we simply reversed the sound with another standard SoundEdit function. Now it ramped up to a big ending. Moral: If you can't find the sound you want playing forward, imagine how it might sound backward.

Step 2. Punch up the sound. So far so good, but the sound wasn't punchy enough yet. Time to insert two more tracks with additional industrial-flavored clips. At the end of the first sound we added an electronic slinky sound. Together they defined a crescendo, a big climactic hit, and a sci-fi aftersound. A reversed pneumatic hiss added drama to the crescendo. And for the right touch of weird, we pasted in a low, wonky squeal that sounded like the noise that space would make if it were ripped apart.

Step 3. Get rid of multiple tracks. Once happy with our sound, we mixed it down from four tracks to one



SHORTENING THE SOUND duration with the Tempo filter.



ALL THE TRACKS of the effect after mix-down.

(Premiere can't handle more than two tracks in a sound clip).

Step 4. Shorten or lengthen the sound. The sound had to be about a second shorter to better fit the QuickTime segment. Rather than clipping off parts of the sound, we used the Tempo filter (in the Effects menu) to speed up the clip without changing the pitch.

Sound-File Formats

Confused about what sounds will play on your Mac? Join the club. The proliferation of sound-file formats and their variations is getting about as bad as it is for graphics, and the widespread posting of sounds to the Web is only making things worse. Get yourself a good sound player utility such as SoundApp or SoundMover and then check out this guide to the most common formats.

AIFF (Audio Interchange File Format)—A high-fidelity sound-file format readable by most Mac and Windows sound software. Makes big files, but AIFF is the cross-platform choice for most serious sound editors.

AU (Sun Audio)—One of the most popular audio formats on the Web; a compact, 8-bit format but with good-quality dynamic range.

MIDI (Musical Instrument Digital Interface)—a music file format for MIDI-compatible software and musical instruments. MIDI files contain information about notes, tempos, instruments, and other music parameters, but not about waveforms. Most of the sound programs discussed here can play back existing MIDI files but can't make new ones; you'll need MIDI music software such as Opcode's MusicShop for that. You can also play MIDI files through QuickTime if you have the QuickTime Musical Instruments file in your Extensions folder.

MOD—Music file format ported from the Amiga and particularly popular in Europe. Relatively new to the Mac and not yet supported by some Mac sound software.

Law Compression—Not a file format but a common method of compressing sounds to achieve better sound fidelity. Many sound-file formats, including AU, AIFF, and MOD, have Law-compressed variations.

SND (Sound Resource)—A low-fidelity Mac sound format, stored in the resource fork of a file. Type 1 snds can be used by any Mac program; Type 2 snds are used by HyperCard. Use ResEdit to work directly with snds, or use a sound utility such as SoundApp to convert them to other formats.

System 7 sound—The most popular Mac-only sound format. Double-clicking on a System 7 sound will play it automatically. Used primarily for system beeps and alert sounds.

WAV—The Windows WAVE sound format. Many Mac sound utilities will translate to and from .wav. There are lots of great .wav-only sound samples on the Web, so don't ignore them.

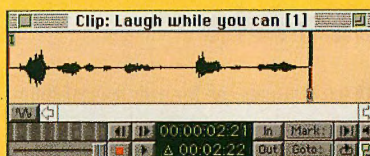
Special Effect 2: Alien Voice

A second effect we needed to create was the voice of Erwin Alien. Erwin is a classic bug-eyed alien, so he needed a classic gurgling alien voice, but we wanted something with a twist.

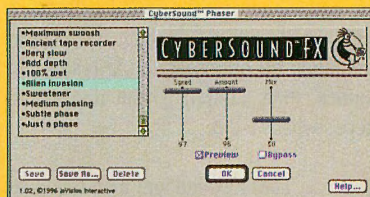
Step 1. Record the dialog. An 11-year-old girl gurgled, "Laugh while you can, doggy boy!" into SoundEdit 16 at 44kHz, 16 bits for maximum quality. (See the sidebar "Mic to Your Mac" for tips about recording live audio.) We saved the sound as an AIFF, imported it into Premiere, and dragged the sound clip onto the movie's Construction Window.

Step 2. Apply filters. CyberSound FX, a suite of audio processing plug-ins for Premiere, had the particular sound effect we were looking for: the Phaser, which imparted a swirling, ethereal, somewhat buzzy quality perfect for an out-of-this-world voice. We also applied two more filters: the Pitch Shifter, which made the voice sound even higher, and the Compressor, which cleaned up the sound so it was easier to understand after all the processing. CyberSound offers many useful

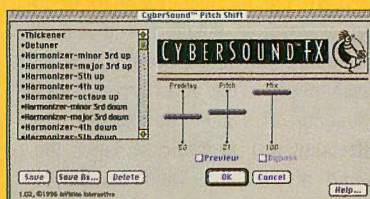
Alien Voice



THE ORIGINAL live recording.



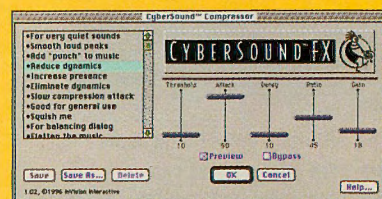
CYBERSOUND FX'S eerie Phaser filter.



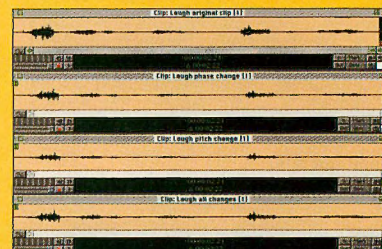
CYBERSOUND FX'S Pitch Shift filter.

presets for each filter, but the best way to learn how each filter works is to play with the sliders.

Step 3. Compile the audio clip with all filters applied to hear the results.



CYBERSOUND FX'S COMPRESSOR FILTER—the last one you should apply to any series of effects.



HOW THE WAVEFORM CHANGES subtly as each filter is applied.



THE FINAL SOUND CLIP in a Premiere clip window.

Five Simple Things To Do With Sounds

You don't have to be an audio wizard to have fun with sounds on your Mac. Here are five easy ways to get started:

1. Record a new beep sound

When "simple beep," "quack," and "indigo" aren't doing it for you anymore, record your own custom alert sound. Open the Sound control panel, click the Add button, click Record, and speak into the microphone. Click Stop when you're done and save the sound. Or you can use any System 7 sound as a beep sound. Drag the sound over your System Folder and it will drop into the System file. The next time you open the Sound control panel, the System 7 sound will be on the list.

2. Assign sounds to system events

Want to hear your favorite sounds whenever your Mac starts up, opens a window, or empties the Trash? You can assign different sounds to various functions on your

Macintosh using several shareware and commercial programs. SoundMaster, available commercially as Kaboom!, is one popular choice. You won't lack for cool sounds, either; Kaboom! comes with plenty or you can find thousands of sounds on America Online and the Web.

3. Listen to an audio CD

Tucked inside your Mac is a nifty little CD player. Pop an audio disc into your CD-ROM drive and launch Apple's Audio Player control panel. It looks and works exactly like a high-end CD player. You can listen through the Mac's internal speaker, but for better fidelity, hook up a pair of speakers or headphones to the Mac's speaker jack.

4. Record sounds from an audio CD

The easiest way to grab tracks from a CD is to use a sound program such as Opcode's AudioShop, which is set up to

easily record audio off any disc in your CD-ROM drive. But you can still record CD audio even if you don't have sound software, as long as you do have QuickTime 1.6 or later and MoviePlayer. Launch MoviePlayer, choose Open from the File menu, and open a track on the CD. Save the file to your hard disk and you have an audio QuickTime movie you can play anytime.

5. Play Sounds on the Web

Audio brings the World Wide Web to life. But to hear anything, you need Progressive Networks' RealAudio, a plug-in for Netscape Navigator and other compatible browsers. RealAudio delivers a high-quality listening experience but only if you have a 28.8Kbps or faster modem. Without RealAudio, you can download sound files and open them in a sound program, but you won't hear sounds as you browse. (You'll find RealAudio Player on The Disc).

Special Effect 3: Star Destroyer

We needed a third custom effect as well—a “whup-whup” sound for Erwin’s spinning star destroyer.

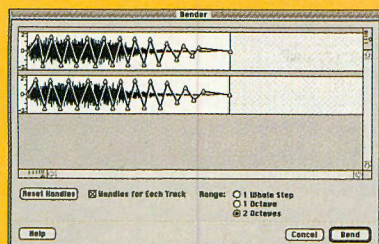
Step 1. In SoundEdit, we opened an ambient swish sound from the Earshot collection, cut off the ramp-up at the beginning of the sound so it would start loud, and used the Tempo filter to make the sound about twice as long.

Step 2. Wavering or pulsating sounds are easy to make with the Bender filter (in the Effects menu). Bender alters the pitch of a sound according to the shape of a pitch adjustment line down the center of the sound’s waveform. Click to add control points to the pitch line and drag the points up or down to make the pitch go higher or lower. The range can be one whole step (which makes for small, vibrato-like changes), one octave (for moderate pitch change), or two octaves (for major changes). We wanted a big, quickly pulsating effect, so we alternated control points at the high and low ends of the range.

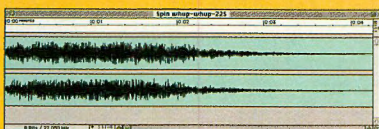
Star Destroyer



THE ORIGINAL jet swoosh sound.



THE BENDER EFFECT to add big pitch changes: Click and drag to configure the pitch adjustment line.



THE FINAL SOUND’S pulsating effect seen in the waveform.

Assemble the Soundtrack

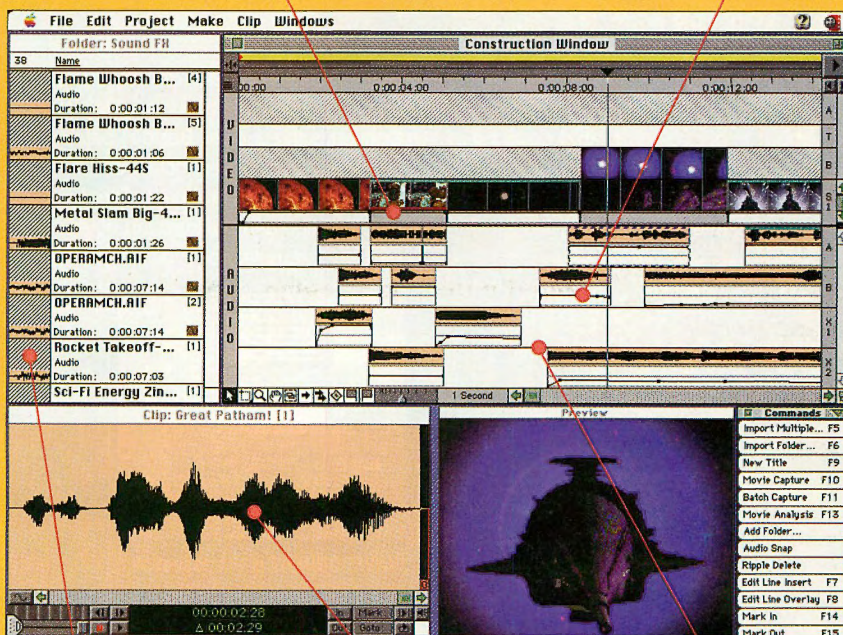
After you’ve made all your sounds, you still have to assemble the soundtrack. In Premiere, audio tracks sit below video tracks; you can make as many audio tracks as you need, up to 99. Typically, you’ll need at least three tracks: one for dialogue, one for effects, and one for music. But you may well have to create several more tracks, depending on the complexity of the soundtrack.

Four Quick Tips

- Make sure dialogue comes through loud and clear. Turn down the volume of music or other sound effects when dialogue is spoken, then turn the background sound up again once the narration has ended.
- Use volume controls to fade sound clips in at the beginning and out at the end. The fades don’t have to be long, but they will eliminate abrupt sounds and distortion that can occur when a loud clip suddenly starts or ends.
- Watch the overall volume level. Make sure some parts of the movie aren’t much louder or softer than other parts—unless that makes dramatic sense. An action scene calls for loud audio rather than quiet conversation.
- Use audio to tie video together. Run a single background sound under two different visuals or make a sound longer to briefly overlap the next video segment. Both techniques help integrate the visuals.

AUDIO CLIPS CAN BE LINKED to video, so the tracks will stay together no matter what editing is done. Select the audio clip, pull down the little pop-up menu at the lower left of the Construction Window, choose the link tool, and select the video clip. Break the link by selecting either clip and choosing Break Link in the Edit menu.

AN AUDIO CLIP CONSISTS OF a miniature waveform in the upper half and “rubber bands” to adjust volume in the lower half. To position the clip, select it and slide it back and forth along the track. To move the clip to another track, drag it to the new track.



BATCH-IMPORT CLIPS by choosing Import Multiple in the Command floater. Clip thumbnails will appear in the Project Window.

REVIEW AUDIO CLIPS in their own windows. You can see the waveform in detail, but you can’t edit the clips as in SoundEdit 16.

DRAG THE CLIP thumbnails from the Project Window to the Construction Window, where you lay out the necessary tracks.

Sound Software Resources

Audioshop 2.1

Opcode Systems Inc.
415-856-3333; <http://www.opcode.com>
\$149.95 (srp)

Audioshop's slick audio-CD-player interface masks a capable sound-editing and special effects program at an unbeatable price. Audioshop can record audio from the internal CD or a source connected to the Mac's sound-input jack, then create playlists of tracks. But Audioshop also features basic waveform editing, special-effects, and mixing, making it the best software for anyone just getting started with sound.



AUDIOSHOP'S BUTTON-HAPPY CD-player hides powerful waveform editing features.

Deck II 2.5

Macromedia
415-252-2000; <http://www.macromedia.com>
\$399 (srp) Bundled with SoundEdit 16

Deck II offers powerful automated tools for recording, mixing, and out-putting multiple tracks of audio, making it the pro's choice for software-only sound editing. You can create unlimited tracks and apply effects without altering the original sound files, allowing you to quickly try out many variations of a mix. Deck II supports Adobe Premiere audio plug-ins.



DECK II is it for multitrack recording.

SoundEdit 16

Macromedia
415-252-2000; <http://www.macromedia.com>
\$399 (bundled with Deck II 2.5)
SoundEdit 16 is a multitrack waveform editor well suited to multimedia work. You can select parts of waveforms and apply effects such as amplify, echo,

reverb, and pitch and tempo changes. You can mix multiple tracks, but Deck II has better tools for this. Best feature for moviemakers: SoundEdit can show frames of QuickTime movies as you edit their soundtracks.

Peak 1.1

Bias (Berkeley Integrated Audio Software)
800-775-BIAS; <http://www.bias-inc.com>
\$499 (direct)

Peak is a waveform editor that does SoundEdit 16 a few better. Along with excellent nondestructive editing features, it offers: unlimited undo and redo; two kinds of scrubbing (a feature that helps you check edits by quickly playing them back and forth); exotic effects such as "rappify" and "Reverse Boomerang"; and compatibility with Adobe Premiere audio plug-ins.

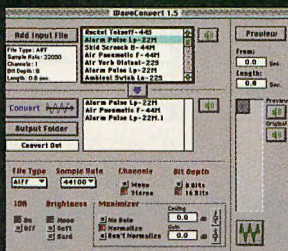


WAVEFORM EDITOR, PEAK, scores high.

WaveConvert

Waves
615-588-9307; <http://www.waves.com/waves>
\$300 (srp)

Need to batch-process, downsample, and file-convert lots of audio clips? WaveConvert is the answer. Besides batch-processing, WaveConvert includes L1-Ultramaximizer, an invaluable filter for reducing distortion and background noise in samples—for example, from voice-overs.



WAVECONVERT is the essential sound file conversion utility.

CyberSound FX Pack for Adobe Premiere

Invision Interactive Inc.
800-468-5530; <http://www.cybersound.com>
\$129 (srp)

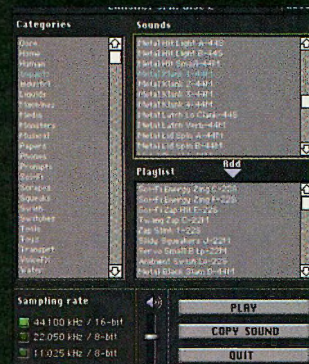
Many movie makers do their sound editing and mixing in Adobe Premiere, but Premiere doesn't offer much in the way of

special effects or audio processing. CyberSound's suite of well-designed plug-in filters lets you apply reverb, equalizing, normalization, chorus, flange, pitch-shifting, and more to any Premiere soundtrack.

Earshot Sound Library

Gray Matter Design
800-933-6223; <http://www.gmatter.com>
\$129.95 (street)

A good sound-effects clip library is a necessity, and Earshot has one of the best for the Mac. More than 1500 CD-quality SFX in AIFF format; categories such as alarms, squeaks, creaks, ambiance, animals, human, industrial, liquids, explosions, and about 25 more.

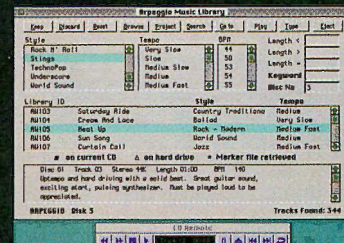


NEED A SOUND? Earshot includes 1,500 of them for you to use.

Arpeggio Self-Editing Music Library With TuneBuilder

800-250-3657; <http://www.arpeggiomusic.com>
\$399 each Production Suite, Multimedia Suite; \$999 (srp) Full Library Set

Need royalty-free music? Grab a track from Arpeggio's 335-selection music library—three CDs come with the basic package—and modify it with TuneBuilder, a program that automatically snips, squashes, stretches, or loops the track to any length, with a proper beginning and end. Arpeggio's library is mostly easy listening music, but the moods and jazz CDs aren't bad, and additional libraries from Killer Tracks and BMG should be out shortly.



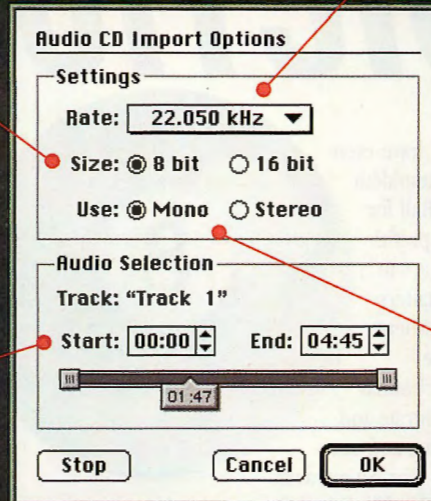
ARPEGGIO'S royalty-free music library includes TuneBuilder for modifying sounds.

Importing Sound: Bits, Rates, and Tracks

Some basic digital sound concepts can be illustrated with Apple's standard audio Import dialog box. You can see this box in MoviePlayer 2.1 if you have QuickTime 2.1 installed. Most sound programs use something similar.

SIZE MEANS THE NUMBER OF BITS used to encode each part of the sound. The more bits, the more steps between the softest and the loudest parts of the sound—in other words, the wider the sound's dynamic range. CD audio uses 16-bits and has a range of 96 decibels (dB); most native Mac sounds use 8 bits, with a range of 48dB.

JUST WANT A SMIDGEN OF SOUND, not the whole CD track? Here's where you specify start and end points. Enter times (minute, second) in the text boxes; drag the slider to play any part of the track.



RATE REFERS TO "SAMPLING RATE," the number of times per second that a sound is sampled, measured in kilohertz. Which rate should you choose when importing or exporting files? A rate of 44.1kHz yields CD-quality samples; 22.05kHz is adequate for music and song; 11.025kHz is for speech only. A common practice is "downsampling," importing a sound at a lower rate to decrease the file size and make the sound play better on slower machines. Here we're downsampling a 44.1kHz sound to 22.05kHz. Trade-off: The downsampled sound is lower fidelity.

YOU CAN IMPORT A CD SOUND, which is usually stereo, as mono or stereo. Choosing mono mixes both CD stereo tracks down to one track, discarding the stereo information but making a more compact sound file. Newer Macs (most Quadras, Power Macs, and PowerPC Performas) can record and play back stereo sound.

We've given you the basics you need to get started, but there are many more techniques for creating great QuickTime soundtracks. There are so many tools available for editing and customizing sounds, plus millions of free sound clips

on the Web, that with a little application and a sharp ear, you too can be a Mac Sound God. ■

Contributing editors Steven and Raf Anzovin are working on an animated spoof of '40s film noir.

SPACE MOVIE TRACKS: Entire movie (every 45th frame) on a single video track with soundtrack as waveform underneath.



AudioSpeak Glossary

Digital audio has its own technical jargon, much of it derived from older analog audio terminology. You can't consider yourself audio-literate until you get these basic terms under your belt.

AMPLITUDE The height of a waveform from trough to peak; in terms of hearing, the loudness of a sound.

BENDER A process that varies the pitch of a sound over the sound's duration.

BIT DEPTH The number of bits used to encode each part of a sound sample. The choices are 8 bit (not as good, but a smaller file) and 16 bit (sounds better, but a bigger file).

CLIPPING Distortion that occurs when the amplitude of a sound exceeds the quantization range; the top and bottom of the sound is "clipped" off.

CYCLE The time it takes to move from one peak in a sound waveform to the next. See Frequency.

DECIBEL (dB) A measure of loudness, corresponding to the smallest difference in sound that the human ear can discern.

DOWNSAMPLING Converting a sound from a higher sampling rate to a lower sampling rate. Makes a smaller file, but reduces sound fidelity. See Sampling.

DYNAMIC RANGE The range between the loudest sound that can be digitized without clipping and the softest sound, measured in decibels. Sixteen-bit sounds have twice the dynamic range of 8-bit sounds.

FADE IN/FADE OUT Increasing audio from zero volume to full volume; decreasing audio from full volume to zero.

FREQUENCY The cycles per second in a sound waveform; measured in hertz (Hz) or kilohertz (kHz). See Pitch.

MIXING Creating a custom audio track from different sources using a sound mixing devices.

PITCH The low-to-high quality of a sound; the higher the frequency, the higher the pitch.

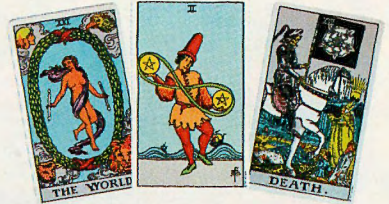
SAMPLING To convert a sound from analog to digital form—i.e., recording sound into your Mac. A **SAMPLE** is the digitized version of a sound.

SAMPLING RATE The number of times per second that a sound is sampled, measured in hertz. The higher the sampling rate, the more accurate the sound sample.

SHAPE Waveform characteristic that determines the tonal qualities of a sound—a rounded waveform sounds sweet, an angular waveform sounds jagged, a complex waveform sounds rich and lifelike.



MACADDICT WORLD NEWS

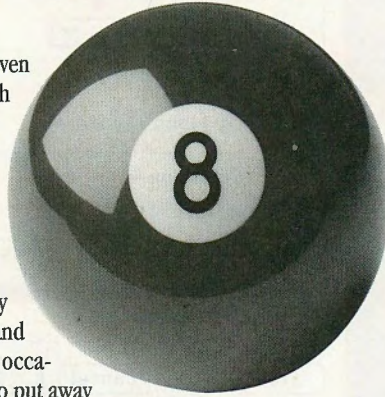


PREDICTIONS '97

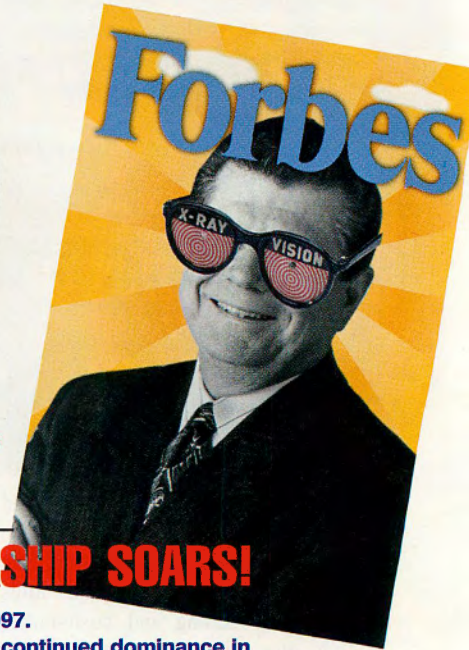
future

It's that time of year again. Before most of you have even trashed the Christmas tree or snuffed out the Hanukkah candles, we've rolled out our Magic Mac OS 8 Ball for our 1997 predictions. Will Apple continue to reap a profit? Yes, definitely. Will corporate Web sites finally start to make money? Outlook not good. Will MacAddict staffers still have their jobs after that wild holiday party where Mark, Kathy, and David... well, never mind that one.

Anyway, after a few (too many?) glasses of holiday cheer, we were able to translate the cryptic "Concentrate and ask again" replies into a list of 59 startling, amusing, and occasionally serious industry insights for the upcoming year. So put away your Ouija board, quit calling LaToya Jackson's Psychic Network, and toss out the tea leaves. For a glimpse into the future of the Mac universe, read on.



"The Man With the Vision": Apple CEO Gil Amelio attains rock star status as a financial guru.



FIVE TECHNOLOGIES YOU WON'T NEED TO WORRY ABOUT

ISDN
Mac OS 8
Internet commerce
Webcasts
Firewire

CORPORATE MOTHERSHIP SOARS!

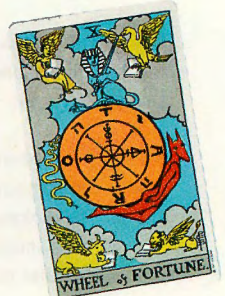
- Apple will remain profitable through 1997.
- Apple will finally be given credit for its continued dominance in the education market.
- To pad its bottom line, Apple will license its logo to nontechnical companies.
- Gil Amelio will make the cover of "Forbes."
- In an exclusive interview with the "San Francisco Bay Guardian," Ellen Hancock, executive vice president of research and development and chief technology officer, declares that she is telepathic, can fly, and was Cleopatra in a previous life. Apple offers no clarification.
- Apple reports that "The New York Times" will buy out "The Wall Street Journal."

HARDWARE GETS HIP

- PowerBooks will become cool again.
- Macs will once again sport innovative designs.
- Processor speeds will continue to skyrocket. Macs will not seem faster.
- Multiprocessor Macs will gain in popularity.
- Newtons will get speech recognition.
- Clamshell Newtons will supersede Motorola pagers as status symbols on campus.
- Apple will announce Tower PowerBooks.

APPLE SOFTWARE GROWS UP OVERNIGHT!

- Apple will ship the Appearance Manager. Users will be wowed by the updated graphics but will be frustrated because they won't be able to alter their own looks.
- Installation and maintenance of System software will get worse before it gets better.
- Open Transport will be so cool that everyone will use it.
- OpenDoc will develop into a viable technology.
- Cyberdog will mature into a great Internet program.
- A rockin' system-level Java engine for the Mac OS will be available.
- Apple will rename QuickDraw GX as the Mac OS 8 Graphics Engine. Consequently, everyone will then adopt it. Oh, and Apple will make it fast this time, too.
- Type 17 errors will surface and plague Mac users everywhere.
- Greg Landweber, shareware author extraordinaire, will ship the Mac OS 8.



TECH SUPPORT GOES SOUTH

MICROSOFT PRANKS

- Microsoft will continue to purchase companies and, more important, content, thereby skirting ever closer to the edge of a government-enforced deregulation.
- ActiveX will ship for the Mac and no one will use it.
- IS managers will ban Microsoft Office due to cross-platform macro viruses.



ALIEN TOOL INVASION

- The Be OS for the Power Macintosh will ship in early 1997, and people will complain bitterly about its shortcomings.
- KPT Acid Trip will ship. It looks really amazing, but it does nothing.
- Bungie will come out with an amazing new game.
- Quark will not ship version 4 of QuarkXPress.
- The 3D art fad will fade away as people return to good taste in graphics.
- We'll see a lot more OpenDoc parts, but few—if any—will be from major developers.

CLONES INFILTRATE U.S.

- RAM prices will rise significantly.
- Power Computing's technical support will get a reputation for being as bad as Apple's.
- Consumer DVD drives will appear. Apple will experiment with one for the Mac, but it won't be a hit until titles start appearing in 1998.
- CHRP laptops will debut. You'll be able to get the Mac OS on a cheap portable.
- Sony will come out with a PlayStation PCI card for the Mac.
- Nabisco will manufacture a Mac clone and call it the Fig Newton.

UPSTART POWER COMPUTING hits the wall as its tech support earns a reputation alongside Apple's.



future

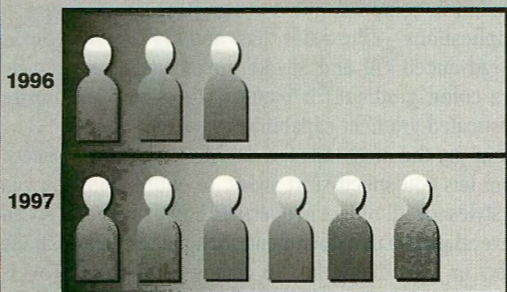
MARKETING GENIUS

- Apple advertising will penetrate consumer consciousness.
- Macs will make significant inroads into Ch with Motorola clones and the new Apple i solution.
- Apple will let all schools upgrade to Mac 2.0.6 for free.
- People in Ohio will quit calling Macs "A".
- The PowerPC Platform (PPCP) acronym be dropped in favor of the steadfast C.
- Power Computing will release a popi coffee-table book of its ad campaign.
- AOL will supply disks to bars as coasters on the off chance that someone will pick them up.
- Apple R&D will begin marketing directly to users, notably MacAddict staff and readers.
- Networked computers will become amazingly popular... but only in France.



THE GENIUSES over at AOL marketing really outdid themselves this time.

Webcast Audience Doubles*



*units equal one viewer (more is better)

OUTLAWS RIDE THE NET

- Home Internet users will see moderate speed increases but no massive speed increases anytime soon.
- It will still be hard to find information on the Internet, despite ever-improving search engines.
- The much-anticipated Navigator browser part for OpenDoc will stink, but a third party will come up with a better browser part.
- Eudora will rapidly replace

QuickMail as the e-mail system of choice in corporations that use both Macs and PCs.

- People will begin to realize that there's no quick way to make money on the Internet but that it's important to be there anyway.
- Internet phone service will no longer be free.
- Net-related crimes will climb.
- Apple's Webcast audience will double—to six.



reviews

Canvas 5.0

DEVELOPER: Deneba Software

CONTACT: 305-596-5644; <http://www.deneba.com>

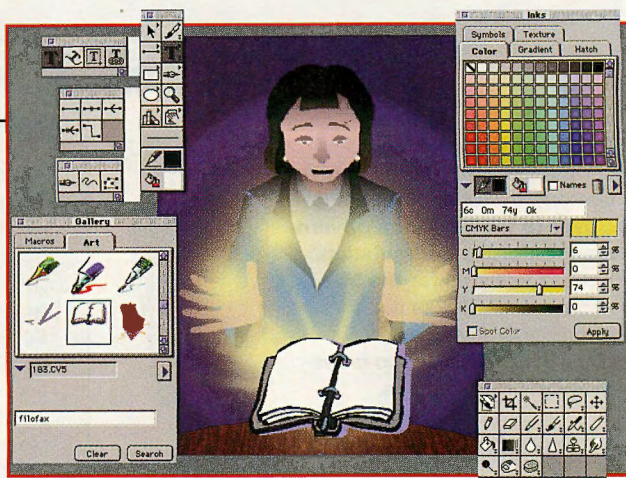
PRICE: \$599 (srp)

REQUIREMENTS: Mac II or later, 16MB of RAM, 20MB of hard drive space, CD-ROM drive, System 7 or later (recommended: 120MHz Power Mac or faster, 32MB of RAM, color scanner, color printer)

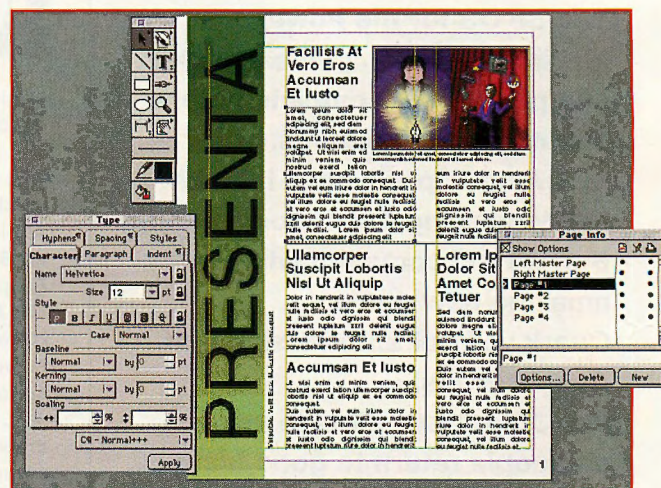
Let's waste no time: Deneba has launched a major coup with Canvas 5.0. The one-and-a-half number leap from version 3.5 sounds like a marketing ploy to bring Deneba's flagship product in line with the version numbers of its competitors, but the bump-up is fully justified. Canvas 5.0 is a complete rewrite, with a totally overhauled and much-improved interface that gives it the combined capabilities of draw, bitmap, page layout, and presentation programs.

You'll see the difference as soon as you start to create a new document. Canvas asks if you want to make an illustration, a layout, or a slide presentation. Each type of document has its own interface metaphor and special tools. Illustration mode presents a standard blank page and pasteboard. Page layout mode gives you an Adobe PageMaker-style workspace; Presentation mode will have Microsoft PowerPoint users feeling right at home, down to the slide widgets along the bottom. No other illustration application does this, but it only makes sense; the ability to work on your entire desktop publication document in one program is a major step forward.

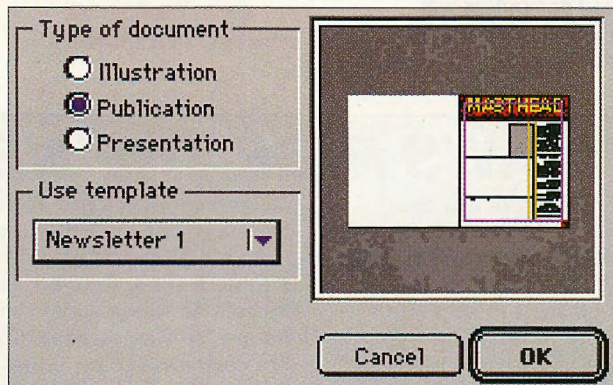
As an illustration tool, Canvas is on a par with Adobe Illustrator and Macromedia FreeHand (at least the versions current as of this writing—6.0 and 5.5, respectively), and edges them out in some areas. Chief among the superior features is Canvas's advanced handling of bitmaps. With just a click on the brush icon in the main tool palette, you can tear off an entire set of paint and image-processing tools, all of which will be familiar to Adobe Photoshop users. Canvas imports every kind of bitmap image you've ever heard of, including Photoshop 3 files (layers are flattened on import, however). There's full support



CANVAS TAKES ON PHOTOSHOP AND ILLUSTRATOR: Canvas's Illustration mode offers the standard pasteboard. Note the wide selection of draw and paint tools—you can work on vector and bitmap art interchangeably and seamlessly.



CANVAS VS. QUARKXPRESS AND PAGEMAKER: Canvas's Publication mode looks like PageMaker and works that way, too. Here is the basic newsletter template.



YOU GET FOUR, FOUR, FOUR APPS IN ONE: Canvas gives you an illustration program, paint program, page-layout program, and presentation program. The Publication and Presentation modes include templates to help you get started.

for alpha channels, masks, and Photoshop filters.

If technical illustration is your groove, you'll appreciate Canvas's auto-dimensioning feature, which measures selected objects and applies standard, arrow-headed dimension lines. This is common in computer-aided design programs but rare in drawing applications—Illustrator has nothing like it. Canvas also boasts advanced Fill and Stroke tools. Any stroke can be filled with a color, gradient, or pattern (Freehand 7 promises more sophisticated gradient capabilities—when it ships).

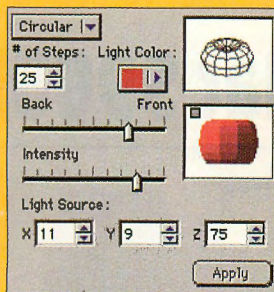
Artists may get the most mileage out of Canvas's style sheets. The program lets you specify text styles, of course, but you can also create styles for all object properties. You can place a styled object in several places in a document, then make changes in the source object or Style dialog box to change all of them. This is an immense timesaver.

A minor irritation: Canvas requires you to double-click an

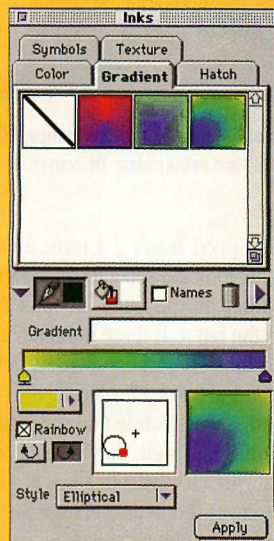


Your Next Palettes?

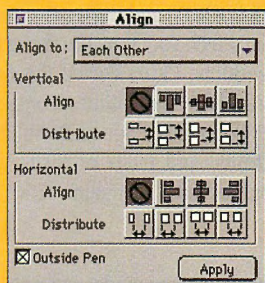
The new Canvas makes heavy use of well-designed tabbed floaters. Here's a selection of the best.



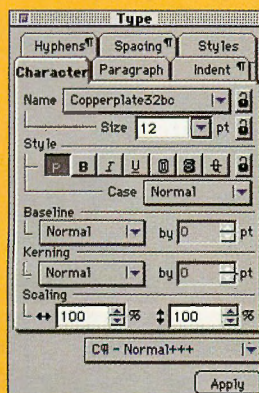
CANVAS EXTRUDE BOX: Make 3D objects out of any vector art, with three extrusion types (parallel, circular, and sweep) and adjustable lighting.



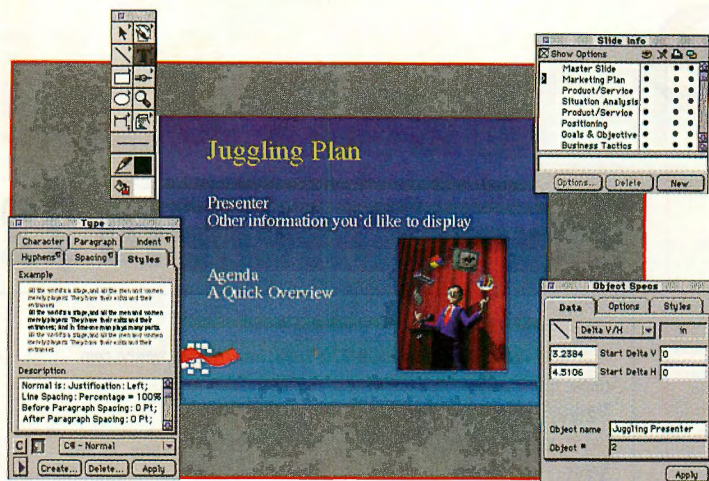
CANVAS GRADIENT BOX: You'll never lack for gradients. This large floater also includes Color, Texture, and Pattern tools, all accessible through tabs. There's also a navigable preview (bottom), and a Trash can for your failed experiments.



CANVAS ALIGN BOX: Grouped alignment tools will save you yet another trip to the menu bar.



CANVAS TYPE BOX: Handle every type parameter in one place, from individual letter styles to style sheets for entire documents. You can also set styles much as in a word processor.



CANVAS VS. PERSUASION AND POWERPOINT, JUST FOR GOOD MEASURE: Making an on-screen slide show? Choose the Presentation mode. It can handle animated builds and do spell checking, too.

object to select it for editing and then double-click again to finish the edit. Most people are used to clicking once to select for editing, which is standard Mac interface practice. It may take you a while to get the hang of this new and nonstandard (not to mention nonintuitive) method, especially if you switch back and forth among Canvas and other programs.

A not-so-minor irritation: Canvas 5.0 is none too stable. The program is finicky to install (be sure to check out <http://www.deneba.com> for updates) and has several known extension conflicts, including one with QuickDraw 3D. One particular problem is with the Extrude function, which brought my Mac down every time I tried to apply it. Deneba promises to ship a bug-fix release that should be available by the time you read this.

Another missing feature is a vector-based plug-in API so that third parties can develop drawing add-ons for Canvas. Deneba should at least make Canvas compatible with Adobe's or Macromedia's vector plug-in architecture so that it can use the many plug-ins available for Illustrator and FreeHand. Further, Canvas may not be the best choice for Web authors; unlike most of the major graphics programs shipping or soon to ship, Canvas currently cannot output HTML directly.

Can Canvas 5 woo away artists long accustomed to Illustrator and FreeHand? In taking on Adobe and Macromedia, Deneba has its work cut out. Many professional graphic artists will probably decide not to make the switch, but if you need the wide range of capabilities Canvas 5 offers and aren't wed to one of the competitors, my advice is to give it a try. For a street price of around \$400, you'll get 80 percent of the functionality of four desktop publishing applications that together cost approximately \$1,700. Overall, Canvas takes top honors as the best all-purpose illustration and layout tool for the Mac—and the best value. —Steven Anzovin

GOOD NEWS: The only comprehensive draw/paint/page layout/presentation app. Superbly designed interface offers many unique tools. Full and fast bitmap editor. Extensive template, clip art, and font collections.

BAD NEWS: No vector plug-in architecture. No HTML. Finicky install. Bugs.



reviews



reviews

PowerTower Pro 225/SuperMac S900L

DEVELOPER: Power Computing/Umax Computer

CONTACT: Power Computing: 800-370-7693; <http://www.powercc.com>

Umax: 800-232-UMAX; <http://www.supermac.com>

PowerTower Pro 225

PRICE: \$5,115 (direct)

SuperMac S900L

PRICE: \$4,295 (street)

Don't move. Don't even blink. SimpleText isn't usually a speed bellwether, but it gives a shock to double-click on a ReadMe and have the file open, just like that, even though SimpleText wasn't even loaded.

The standard configurations of both the PowerTower Pro and the S900L go head-to-head with their motherboard-mate, Apple's king of the hill, the Power Mac 9500. There's no clear "winner," because every user is going to be looking for some magic bullet, but a few things do stand out here and there. The Power Mac 9500 has a solid track record as a top-notch performer and it is highly expandable, for example, including 12 slots for RAM. Both the S900L and the PowerTower Pro have only 8 RAM slots (they do fill up quickly), and the cases feel a bit cheaper. The S900L and the 9500 have 512K of Level 2 cache, whereas the PowerTower Pro has a full (and replaceable) 1MB. The 9500 includes ATI Technologies' video board with 2MB of VRAM, whereas the others come with the 8MB Twin Turbo 128 video card from Integrated Micro Solutions (IMS). All three machines have interleaved memory for that 10 percent speed boost, six PCI slots, 2GB hard drives, 8X CD-ROM drives, built-in Ethernet, and wicked-fast 604e processors (225MHz in the Pro and S900L; 200MHz in the 9500). The keyboard and mouse included with the non-Apple brands received mixed reviews, but the Power Mac 9500 doesn't even give you one to disparage.

No, these are not your parents' SE/30s. In fact, both the PowerTower Pro and the S900L clock in at 160 percent to nearly



HEY THERE, BIG BOY: Against some of the new, corporate clones, Power Computing's designs are beginning to look rather nice. Of course, it what's inside that counts...

twice the speed of a 9500/132 in Speed Tester 2.1 tests. An RGB-to-CMYK conversion of a 2.25MB file took 2.3 seconds on the S900L, 2.5 on the Pro; a Stained Glass filter on the same file took 25.90 seconds on the former, 23.52 on the latter. If these numbers aren't useful to you, think of it this way: Adobe Photoshop opens so quickly, there's no time to read which plug-ins are being loaded.

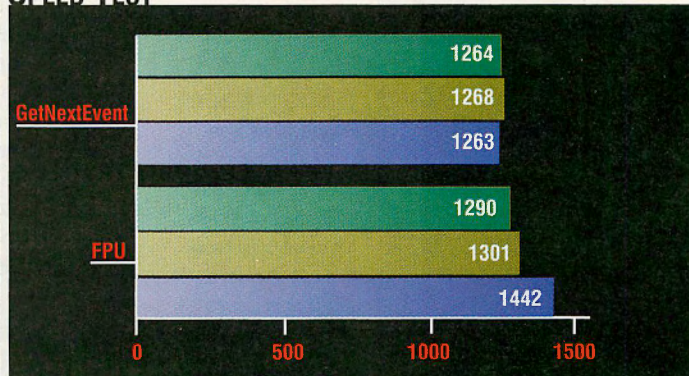
Mere speed, however, does not a worthwhile computer make. The overall feel of both these clones is... well, they're both Macs. Very fast Macs. But nothing else surprises, which in a way is a relief and the deepest, if not most conscious, hope of everyone who has rooted for the clone market. Speaking of clones, the clone tradition of bundled software continues: The S900L comes with Casady & Greene's Conflict Catcher 3, FWB's CD-ROM and Hard Drive Tool Kit, Asante's NetDoubler, and MicroMat's Tech Tool Pro. The PowerTower Pro includes both of FWB's products; ClarisWorks; the Grolier Multimedia Encyclopedia; Now Software's Now Utilities, Contact, and Up-to-Date; Intuit's Quicken SE; Connectix's Speed Doubler; 250 Bitstream Type 1 and Type 2 fonts; and trials of Nisus Writer, CompuServe, and yes, America Online. Such a bargain.

PHOTOSHOP TESTS



Times are in seconds. The shorter the bar, the better. All operations were performed with all extensions off. The Stained Glass filter was run at default values of cell size 10 border 4, and light intensity 3.

SPEED TEST



Times are in milliseconds. Tests were performed with SpeedTester 2.1. Values were averaged over five tests for each operation. For 3D applications, the Floating Point Unit (FPU) test is the more crucial.



UMAX HAS RIDGES: The S900L is well-protected and fashionable, too!

Pro certainly wins in sheer volume of bundled software. The S900L might be a good choice for people working in networked office or heavy-duty graphics/multimedia environments. Although the 512K L2 cache is not upgradable, the S900L includes a helping of new speed technology, including Umax's Advanced Scalable Processor Design (ASPD), PCI-to-PCI bridge communication, and a super-fast networking upgrade. In theory, ASPD allows you to add a second processor card, keeping the original; the idea is that single-processor add-on cards will be cheaper than a two-chip full replacement card (however, as of this writing, Umax has not finalized plans for such cards). The PCI tweak enables full communication among all PCI slots, with extra-fast "bursts," though compatibility may become an issue. Finally, Umax offers its own E100 card for Ultra Wide SCSI and 100Base-T Ethernet capability, giving you 40MB/sec of data transfer to the hard

drive, and 100 megabits/sec over a network (to be fair, such capabilities are available separately on some third-party PCI cards). With a fast AV hard drive (usually 4GB or more), this box could be a powerful full-screen video-editing station. Out of the box, both the PowerTower Pro and the S900L provide more usability and speed than a 9500/200, and the video quality is undeniably more impressive. What remains for Apple? Well, more than 20 years of service, the best-looking case, and the most RAM expandability, though the buyer will determine how much that's worth.

All in all, you really can't lose, except for the fact that you might be biting your nails, wondering who'll next walk up and say, "My processor can beat up your processor." On the other hand, considering how quickly these boxes perform, you're not going to have a whole lot of time to take your hands off the mouse. —D. D. Turner

PowerTower Pro 225

GOOD NEWS: Fast, fast, and fast. Very expandable. 1MB L2 cache is replaceable. Very stable.

BAD NEWS: Microphone and headphone ports are on back. Case doesn't feel as well-put-together as some but better than others.



SuperMac S900L

GOOD NEWS: Very fast. Easy-to-work-with insides.

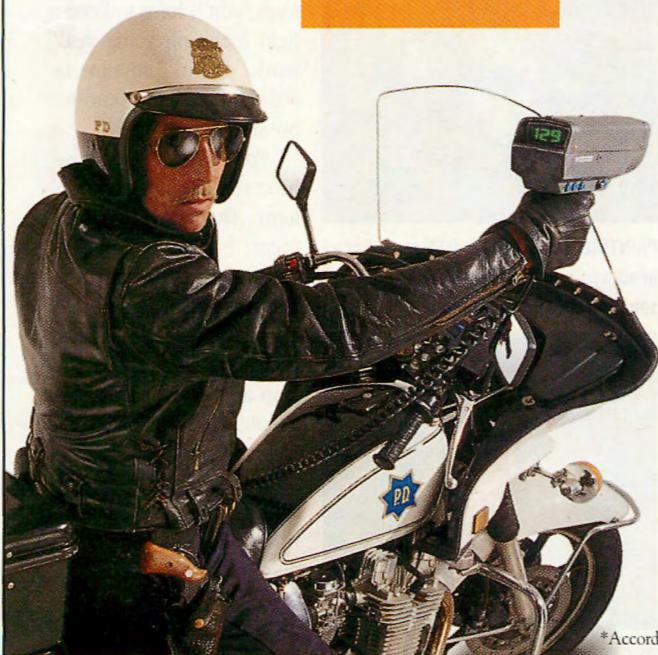
Aesthetic case.

BAD NEWS: Aesthetic door can be a pain. Nonreplaceable 512K L2 cache. Some performance tweaks diverge from standardization.



Now

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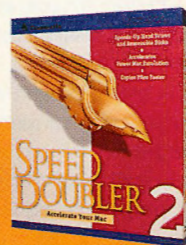
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reviews

Detailer 1.0

DEVELOPER: Fractal Design

CONTACT: 408-688-5300; <http://www.fractal.com>

PRICE: \$300 (street)

REQUIREMENTS: Power Mac with 16MB of RAM, System 7.0 or later, CD-ROM drive, 24-bit color (recommended: 120MHz or faster CPU, 32MB of RAM, pressure-sensitive tablet)

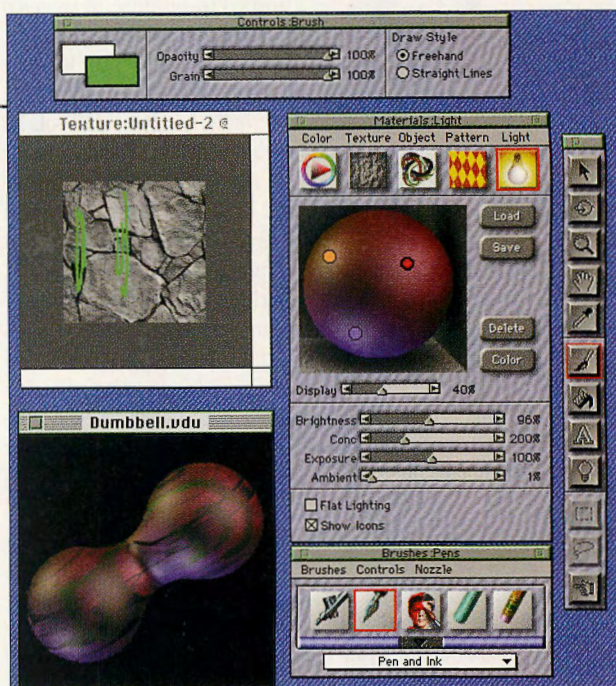
You've spent days in your 3D modeler creating the ultimate Indy 500 car. Now you want to add vital details: the trim paint, decals, oil stains, and road dirt. Three-dimensional applications don't let you paint directly on the model, so you create images in Adobe Photoshop and try to tack them on with the 3D program's clumsy mapping tools. After hours of repainting and refitting, you throw up your hands and settle for a bland texture.

Fractal Design Detailer nearly solves this typical problem. Now you can import models from most Mac 3D applications; paint on the models (in a way that will be comfortable to anyone familiar with Fractal Design Painter's natural-media painting tools) to add realistic colors, textures, and fine details; then export the models for final rendering in Fractal's Ray Dream Designer 4.1 or any 3D program that imports 3DMF (QuickDraw 3D metafile).

Although traditional mapping techniques are well-suited to creating flat maps, such as signs on billboards, they come up short when mapping a complex object such as a human head. In contrast, Detailer offers five different mapping geometries—cylindrical, spherical, cubical, pass-thru (also known as planar mapping), and implicit mapping (often called UV mapping)—that aim to give you the control to fit any kind of object. (See

"Mapmaker, Mapmaker, Make Me a Map" at left.)

Within each mapping geometry, Detailer lets you control surface attributes through five different map layers: Texture (for adding a wood, stone, or other look to the object, or for adding a bitmap image, such as a bottle label); Bump (for adding relief detail to the surface); Highlight (for specular shine); Reflection (for matte, gloss, and mirror effects); and Glow (to make the object radiate its own light). Considering the many possible map layer combinations, each with several slider-adjusted parameters, plus the truly infinite variety of



COLOR YOUR WORLD (AND MODEL IT): Detailer uses the same natural-media interface as Fractal's Painter and Dabbler to paint on 3D models. At bottom left, the model window; at right, the well-designed lighting palette.



PAINTING A HEAD: This DXF model of a head was imported into Detailer from a sample CD-ROM of 3D models.



THE FINISHED MODEL: with all the appropriate details—hair, skin tone, eyes, and sweater color. This map would have been virtually impossible to create in Photoshop or in any current Mac 3D program.

photorealistic, painterly, or abstract surfaces afforded by Detailer's natural-media tools, you'll have to keep a tight focus on your "real" work so as not to be seduced by the endless possibilities.

For all its usefulness, however, Detailer has problems. The real disappointment is that it doesn't compensate for texture-mapping distortion, which all mapping geometries create around the edge of a map as it is projected onto an object. To visualize the distortion, think of mapping a tiled square onto a sphere. The surface pattern would be "pinched" at the poles the way a multicolored beach ball's stripes meet at both ends. For the beach ball, that's the effect you want, but it would ruin a model of a ball of thread, which should look about the same from any angle.

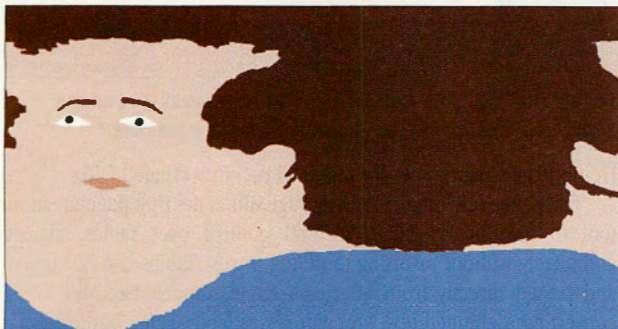
Mapmaker, Mapmaker, Make Me a Map

How do you get a flat texture or image onto a 3D object? By "mapping." The term's roots reach back to the time when mapmakers first tried to create a flat representation of the spherical world. Detailer provides five mapping geometries, each intended for certain kinds of 3D objects.

- Cylindrical mapping is best for cans, pillars, pipes, and other tubular models. Look out for distortion in narrow-necked bottles; the taper will distort your map.
- Use spherical mapping to create fantastic planetary surfaces. Pinches the texture at the top and bottom, so doesn't work well for golf balls.
- Pass-thru is the choice for mapping onto completely flat surfaces such as walls, windows, mirrors.
- Making cubes? Use cubical mapping. Be sure the image for each face is the same size and aspect ratio.
- Implicit mapping allows a much closer fit to the surface than the other geometries, so it works best for complex models. Models must be endowed with UV coordinates before you can use implicit mapping. Ray Dream Designer does this, but many other 3D modelers don't.

Three-dimensional mapping software gets around this limitation by "spreading" the texture map to compensate for geometric distortion. For example, on a flat Mercator map of the (oblate spheroid) world, the top and bottom edges have been distorted—spread—so that Greenland and Africa appear about the same size. But when you apply this map to a sphere, the spread compensates for the pinch, leaving a fair approximation of the actual geography of Earth.

Detailer's maps placed on a sphere have a noticeable pinch, even if you use the spherical mapping geometry. Because you are limited to just one kind of mapping geometry per object, you can't get around the problem by mixing mapping types. Detailer's



I LOVE YOUR FUNNY FACE: Detailer shows a flat version of the texture as you work. As you paint directly on it, the texture updates on the model in real time. The hard part is visualizing how the flat map relates to the 3D model.

manual offers suggestions and workarounds for this problem, but they amount to eyeballing the distortion factor and trying to compensate for it yourself.

The program also could offer better ways to adjust the orientation and position of texture maps as applied to the object, independent of the mapping geometry used. Detailer allows you to align the map coordinates to the view and to move and scale the map, but the method it uses is harder to visualize than it should be. A 3D graphical way to adjust the mapping is a necessity; no texture-mapping program can afford to not have one.

On the plus side, Detailer's lighting palette is outstanding. It's a model for other 3D developers. Detailer lets you drag lights around interactively on the surface of a shaded sphere, giving you a much better feel for the lighting of a scene. Unfortunately, Detailer is not meant to be used as a final output tool and supports only infinitely distant light sources, not spotlights or other types.

Despite its faults, Detailer is a valuable addition to a 3D artist's toolkit. But don't throw away Photoshop yet. Detailer has a way to go before it becomes the only program you'll need for 3D mapping on the Macintosh. —*Raf Anzovin and Steven Anzovin*



GOOD NEWS: Paints on 3D objects. Fast rendering. Multiple undos. Great lighting palette.

BAD NEWS: Cannot compensate for mapping distortion. Mapping positions are hard to visualize. Only imports and exports Ray Dream Designer and 3DMF formats.

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reviews

Adobe PageMill 2.0

DEVELOPER: Adobe

CONTACT: 800-685-3505; <http://www.adobe.com>

PRICE: \$99 (street)

REQUIREMENTS: Power Mac with 10MB of free RAM (16MB of free RAM recommended), 2X CD-ROM drive

For nearly a year, Adobe PageMill 1.0 was the only page-creation tool to offer WYSIWYG Web-page editing, which allowed (in theory) Web authors to create pages without having to learn a speck of HTML. In practice, many of PageMill's capabilities were quirky and limited, and, what's worse, it offered no way to edit bare HTML short of launching a word processor. Claris Home Page 1.0 recently leap-frogged PageMill's features, but now Adobe hops back with PageMill 2.0.

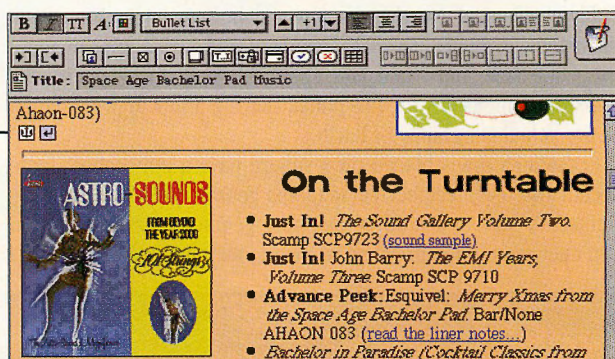
The new version fixes most of the quirks and adds such sorely needed capabilities as search and replace, spell check, HTML source mode, and true WYSIWYG tables and frames. However, it is flawed mainly by a confusing interface.

Version 2.0 hews closely to the original's appearance. There's a toolbar, and a large button switches between browser-like preview for testing and WYSIWYG editing mode. PageMill now lets you switch to HTML source editing, and you'll need it, because PageMill still doesn't support less-common tags such as BLOCKQUOTE. However, Adobe has fixed version 1.0's annoying habit of using
 tags where <P> tags were intended.

WYSIWYG editing mode gives you almost everything you could hope for—you can drag and drop page elements around the page, between pages, and between frames; drag GIF, JPEG, and PICT images directly onto a page. PICT files are automatically converted into GIF. You can set an image to interlace or be transparent, or create client-side and server-side image maps.

Preview mode will display animated GIF images in motion; QuickTime movies, PDF files, and other plug-in-related files can be dragged from the Finder. PageMill's place holders allow you to insert CGI scripts and Java applets.

Links can be created in a variety of ways, including by typing, by dragging a page icon from another page, or by dragging a link directly from your browser. The plethora of disparate linking methods is confusing, though, and PageMill doesn't offer Claris



CUE UP THAT WAX, HEP CAT: Toolbars give access to all the common editing tools, and you can see your swinging music in full color.

Home Page's handy pop-up menu of recently created URLs.

Tables are fully implemented. PageMill is the first page-creation tool to give nearly full WYSIWYG control over tables, almost completely without resorting to dialog boxes. Tables can be copied and pasted directly from Microsoft Excel, though PageMill won't convert tab-delimited text. You can resize by dragging borders and, through toolbar buttons, can add, delete, merge, and split rows, columns, and cells. You can also color individual cells, and set the border and cell padding. You can set the entire table or individual cells to specific pixel or percentage widths, a boon for those of us who use tables for layout.

Frame creation is implemented nicely, offering a true WYSIWYG view of a frameset—something no similar application yet offers. Creating frames is as easy as Option-dragging the top or side of a page. Though we remain leery of the overuse of frames, PageMill makes them incredibly easy to create.

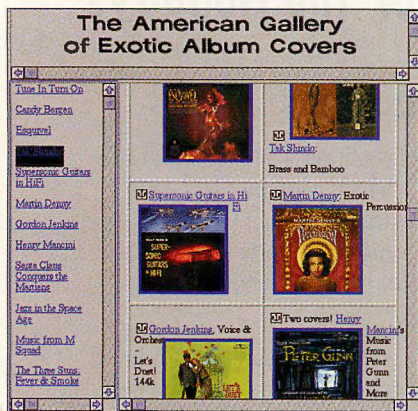
PageMill 2.0 has all the requisite appurtenances: a scrapbook, customizable background colors and patterns displayed live, a bare-bones spell checker, and a statistics box which estimates download times. Find and Replace works with any element, even images. You can create forms, but, as in most similar applications, only one per page. In a baby step toward a fully functioning preview mode, PageMill can switch to a browser to check links to remote URLs.

But using all of PageMill's features is confusing. There are far too many obscure methods of dragging, selecting, clicking, and moving: Option-dragging a table border does something different than shift-dragging; to select linked text you have to triple-click it; Shift-Return creates a
 tag; and so on. Rather than use dialog boxes for text and number entry, PageMill offers the oddly named Inspector, a floating box that alters its contents depending on what's selected on the page. I had to resort to reading the manual (gaspl!) to learn how to perform simple tasks such as setting an image's transparency.

Among Web-page-creation tools, PageMill 2.0 takes the lead in flexibility and WYSIWYG features, especially in tables and frames creation. Despite its Byzantine interface, PageMill is powerful enough to earn its place as the Web application of choice. But keep your ears to the ground: Claris Home Page 2.0 is slated to appear soon. —Joseph O. Holmes



CELL, CELL, CELL: If you don't like your layout, resize table cells simply by dragging the borders. Sure beats previous versions.



I DONE BEEN FRAMED: In a brand-new and overdue feature, PageMill previews just what your frames' document will look like.



GOOD NEWS: Full WYSIWYG frames and table support. Plenty of drag and drop. Excellent image support. Good page preview.

BAD NEWS: Interface is confusing and hard to remember. Needs better URL linking tools.

reviews



reviews

Persuasion

DEVELOPER: Adobe

CONTACT: 800-685-3505; <http://www.adobe.com>

PRICE: \$395 (srp) including Acrobat Distiller 3.0; \$129 upgrade from any version of Persuasion

REQUIREMENTS: 68030 (040 recommended), System 7.0 (7.5 recommended), 8MB of free RAM (16MB recommended), 20MB of hard drive space, CD-ROM drive

Persuasion, which first shipped in late 1988, creates virtual slides that you can then make into actual slides or transparencies for projection, or display on your monitor. Persuasion adds visual and audio transition effects, and slides "build" themselves layer by layer, either manually at the presenter's click or automatically (quasi-animation).

Persuasion also automatically prints out speaker's notes and audience handout versions of the slides in a presentation, and has a full-featured outliner that can print an expanded or compressed hierarchical outline of the heads and text on the slides. And it has top-of-the-line automatic charting, including organization charts.

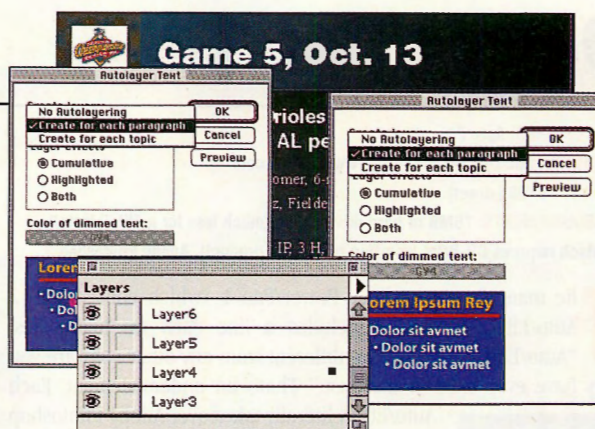
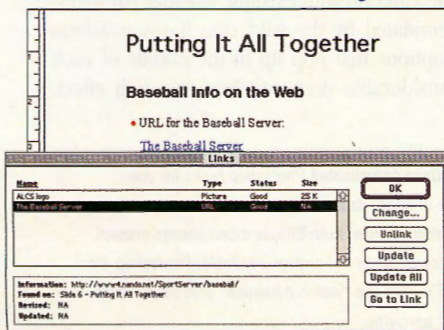
To create a Persuasion presentation, pick one of the included AutoTemplates or create your own. If your slides involve text, you can type a hierarchical outline (each first-level paragraph equals one slide) in the built-in outliner, or you can import your outline from a word processor. Importing graphics into the slides is a breeze, through either drag and drop or the Import command. The process, in general, is similar to what you do in a page layout program.

Slides are based on "master slides," which have place holders into which the text from your outline automatically flows. Additionally, the master slides can be based on "background masters," which are useful for common elements that will be used on your master slides. You can have as many master slides and as many background masters as you want.

Persuasion is intended for graphic designers, educators, service providers, medical/scientific professionals, and business professionals—all people who create or deliver presentations frequently. One person might create the outline while another creates the graphics, while yet another (the Persuasion operator) designs and creates the template and then, when everything is ready, merges the outline and graphics into the slides.

Persuasion 4.0 is very Web-oriented: It supports drag and drop of URLs, the major Web browsers, and GIF and JPEG graphics. It includes several very usable Web-oriented templates. Also in keeping with the multimedia theme, the Persuasion package now includes Adobe Acrobat

THE LINKS DIALOG BOX shows one imported graphic in this presentation and one URL. The URL text is visible just above the dialog box; the actual URL is in the Information line in the dialog box.



IT'S GOING, GOING, GOOOONE! The Layers palette on the right shows the bullet list selected on Layer 4. The Autolayer Text dialog box on the left will cause each bullet point to come up on a separate layer.

Distiller 3.0, so you can easily create PDF documents. Persuasion 4.0 has undergone the same interface changes (such as menus, palettes, keyboard shortcuts, and redefined processes) that other Adobe products have, so users of Photoshop 4.0 or PageMaker 6.5 will benefit from a more uniform environment.

In other ways, too, Persuasion has become more like Photoshop and PageMaker. It now has a layers palette, an eyedropper tool, a links-management tool (for both imported graphics and URLs), TIFF import, EPS export, GIF import, and JPEG import and export, drag-and-drop import of native Photoshop and Adobe Illustrator files (with layers intact), and a cropping tool—the list goes on.

The Web emphasis is entirely directed toward PDF generation, not HTML-based Web work. That said, Persuasion does make it easy work. After setting up your presentation as you normally would, you add URLs via drag and drop from your Web browser. Then you export the presentation in PDF and publish the PDF document on your Web site for viewing by browsers that support the PDFViewer plug-in. Is this really a great way to make a Web site? Possibly, possibly not. At least it presents another viable alternative, and the only one that gives you true graphic control over the output.

Persuasion comes with three stock color systems, all with 160 colors: RGB, NTSC, and PAL; plus you can set up two different custom color systems of your own. (It also comes with three black-and-white and grayscale systems.) What it doesn't include is the Web-safe 216-color palette (the colors that the palettes intrinsic to the major browsers on Mac and PC share); but you can download a GIF that contains those colors, import the GIF into Persuasion, and use the eyedropper tool to add the colors to your custom color system. Because you can import color systems from one presentation to another, you're set after you've done this once.

In the world of presentation software, Persuasion remains at the top of the heap. Considering how powerful a program it is, Persuasion is amazingly easy to use. It runs rings around its competition in almost every category. —Phil Gaskill



GOOD NEWS: Already-impressive feature set gets even better.

Easy to create Acrobat PDF files with embedded URLs.

BAD NEWS: Not scriptable.



reviews

reviews

Power/Pac 1

DEVELOPER: Auto F/X

CONTACT: 603-875-4404; <http://www.autofx.com>

PRICE: \$199 (street)

REQUIREMENTS: 75MB of hard drive space (much less for a "lite" install, which requires CD-ROM insertion to use the product), Adobe Photoshop 3

The manual to Auto F/X's Power/Pac 1 (which consists of 12 Auto/Effect modules) includes a line early on that states, "Auto/Effect Modules are different from any other software you may have ever used in the past." That's an understatement. Each

Auto/Effect literally takes over Adobe Photoshop to apply effects to images—something that you may find difficult to swallow.

The idea behind Auto F/X is that it creates effects for Photoshop (only version 3 at this point) images which you could certainly do yourself but would have to learn about channels and the like (which many Photoshop users would rather pretend just didn't exist). The software contains the following effects: Emboss, Recess, Screen, Saturate, Glow, Select, Path, Shadow, Focus, Textures, and Graphic Edges.

Of these, Saturate, Select, Path, Screen, and Focus can be accomplished by anyone with minimal Photoshop skills; the components add little or nothing to the built-in Photoshop capabilities. Emboss, Recess, Glow, and Shadow can be done by mid-level Photoshoppers, who would find these Auto/Effects cumbersome and limiting. The two really useful effects are Graphic Edges, which applies custom, ragged edges to selections, and Textures, which is really just a nice Texture fill process (all the textures are predesigned and unchangeable).

How these effects are accomplished is actually much more interesting than the effects themselves. A control panel, called OneClick Runtime, is installed in your Control Panels folder, which inserts a new menu in your menu bar—not just for Photoshop but for every application, including the Finder. Of course, all the options in the menu are grayed out when you aren't in Photoshop, which makes the little button annoying beyond belief. Once you are in Photoshop and choose an effect, Power/Pac 1 springs into action, doing all sorts of things to achieve the effect you've chosen. It's not very fast, and during the time the Auto/Effect is in control, screen artifacts are left everywhere. When the effect is finished, you are presented with an "OK?" button to click if the result is what

you had intended. It's an all-or-nothing proposition: Choosing Cancel leaves the image untouched, so if you make one unhappy choice anywhere in the process, it's back to the drawing board.



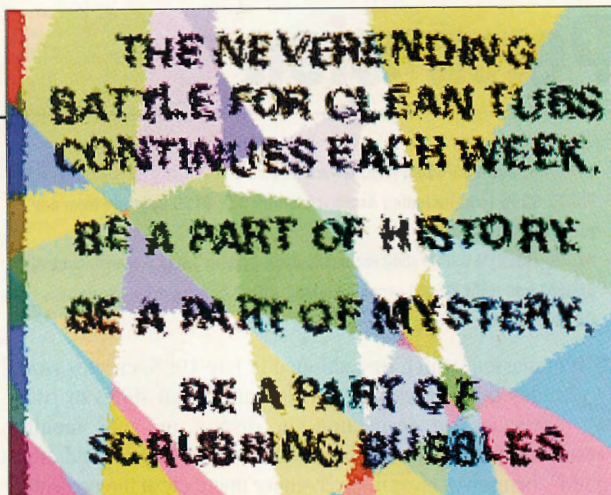
LOOK, MULDER, A SPECIAL EFFECT: Here is an authentic UFO picture, totally believable except for a lack of glow.



TRUST NO ONE: It took a few minutes (Photoshop users' lives are counted out in seconds), and still, Auto/Glow delivered not quite the desired result...



THE SHOT THEY DIDN'T WANT YOU TO SEE: ... unlike old-fashioned Photoshop work, which gave definite feedback at each step of the way.



IT'S A FINE, FUZZY LINE: Find Edges and a lot of filter work might produce this edge effect, but this Auto/Effect demonstrates some advantage to automation.

Here's what it took to use the Glow effect: I shot a photo of a flying saucer. The Glow effect walked me through five different dialog boxes, many of which offered options to modify the effect while it was in process. The trouble was, I had no idea what was going on while the screen flickered around and while layers and channels were added and deleted. Finally, I was informed that the effect was finished. Where the flying saucer had been, there was a white, gaping hole with a lovely yellow glow around it. At no point did the program even hint at this outcome. It would be faster to create the proper effect by using just the standard Photoshop tools, provided that you know what you're doing.

The results achieved with the Auto/Effect modules were usually satisfactory—only occasional mangles, most of which could be canceled and redone. It seems, however, there are better ways to produce several of the effects (such as Saturate and Select) without any additional software than Photoshop. The Shadow, Emboss, Raise, and Glow functions are much slower than their counterparts in Alien Skin's Black Box 2 or Extensis's PhotoTools (and both of those applications are approximately half the price of this Power/Pac). Nor do the Auto/Effects modules provide some of the other packages' options (such as the full-screen preview in PhotoTools) that are necessary to get a good effect. The Graphic Edges effect is the only worthwhile module of this Power/Pac—it provides something truly new, and difficult to do otherwise, even though the controls are rather cryptic.

It's unclear who the proper audience for Auto/Effects is. Professionals will find the screen hijacking unpleasant, and the effects aren't anything you can't do with existing, cheaper packages. Beginners might be intimidated by the wild ride the Auto/Effects present, by the arcane options that pop up in the middle of each process, and by the considerable prep required for each effect. —*Ted Alspach*

GOOD NEWS: Does complicated Photoshop tasks for you.

Good selection of edges and tiled fills.

BAD NEWS: Painfully slow. Auto/Effects menu always present.

Occasional glitches. Undo not always available. Photoshop 4's Actions palette makes the "watch it happen" procedure seem antiquated and annoying.



29 SENATORS MURDERED.
A SABOTEUR LOOSE IN THE CITY.
MARTIAL LAW DECLARED.
FLOODS, FIRES AND RIOTS.
(JUST ANOTHER DAY IN ROME, 205 A.D.)

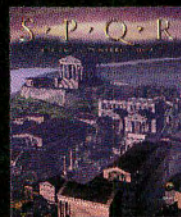


CD-ROM
WINDOWS®95/3.1
AND MACINTOSH



GT Interactive Software
Preview SPQR for yourself at
www.gtinteractive.com/~SPQR

Totally immersive and faster than the hit web game, SPQR takes you inside an historically accurate reconstruction of Imperial Rome. Only catch is, there's a plot afoot to destroy it. As a gifted inventor's apprentice, you must discover the true identity of the saboteur. You'll call upon your knowledge and skill to navigate a labyrinth of politics, murder and deceit. Succeed, and the Empire is saved. Fail, and it's turn out the lights. Don't feel pressured or anything, though.



S · P · Q · R

THE
EMPIRE'S
DARKEST
HOUR

S.P.Q.R., S.P.Q.R. The Empire's Darkest Hour and CyberSites™ are trademarks of CyberSites, Inc. ©1996 CyberSites, Inc. All Rights Reserved. Created by CyberSites, Inc. Published and distributed by GT Interactive Software Corp. Windows® is a registered trademark of Microsoft Corporation. Macintosh® is a registered trademark of Apple Computer, Inc. All trademarks are property of their respective companies.



reviews

Mariner Write 1.3

DEVELOPER: Mariner Software

CONTACT: 502-222-6695; <http://www.marinersoft.com>

PRICE: \$69.95 (street)

REQUIREMENTS: 68020 or better, System 7.0 or later, 2MB of RAM



FIND A DEMO of Mariner Write 1.3 on The Disc.

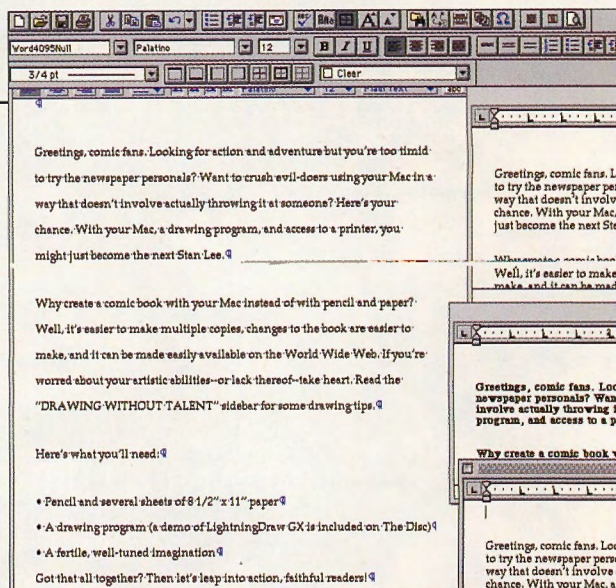
Mariner Write 1.3, the new word processor from Mariner Software, has a split personality, temporally speaking. Installing Mariner Write is like taking a stroll into history. Here's a program that ships on two *floppy* disks and comes with a manual that's 100 or so pages long. The full installation of the program occupies 1.8MB on a hard drive (one-tenth of what Microsoft Word 6 takes up). The program has an equally small RAM footprint, using only 1.9MB of RAM on Power Macs and 1.3MB of RAM on Macs of the non-Power variety.

Using Mariner Write, however, is anything but a trip into the past. Despite its small size and terrific responsiveness, Mariner Write packs all the power of a modern word processor. It not only includes the basic formatting features you'd expect (fully stylable text—including strikethrough, boxed, super- and subscript—plus adjustable line spacing and justification) but also packs more advanced formatting features, such as multiple columns, support for importing pictures (PICT, EPS, GIF, JPEG) as in-line graphics or objects with text wrapping, and colored text. Mariner Write also sports standard editing tools such as a spell checker, full search-and-replace capabilities, and drag-and-drop editing.

Still, standard features aren't what set a word processor apart from its competition. Mariner Write boasts a few points that push it above its text-bending peers. First, it's AppleScript savvy. In the Edit menu, an AppleScript menu item lets you choose one of several pre-installed scripts (such as Strip

Linefeeds and Show In Finder), or you can write your own scripts and put them in Mariner Write's Scripts folder. This is a real boon for people who need to do a lot of repetitive editing on documents. PowerBook owners (especially those with older models) will love Mariner Write not only for its small memory footprint but also for its bold cursor option (which makes the cursor easily visible) and its Faster option (which limits hard drive access, keeping power consumption to a minimum).

Mariner Write offers a few other nifty touches. The program serves the needs of those who use multiple languages through its

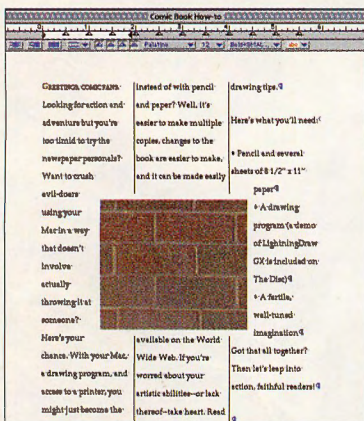


NOT SO PERFECT: If there's one thing keeping Mariner Write from awesomeness, it's the uncertain formatting when moving files between it and other word processors. These all began looking the same.

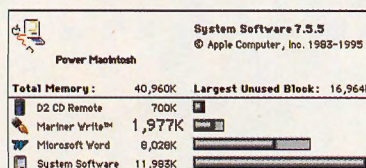
support of WorldScript. Maneuvering through a Mariner Write document is easy: Dynamic scrolling means you can slide the scroll box up and down, and the text scrolls as you drag the box. Diamond Keys let you whip the cursor to a given point in the document, without touching your cursor keys (and taking your hands off the home position, for you touch-typists). Made a mistake a little while ago and want to undo it? No problem. Mariner Write supports 10 levels of undo. Invisible characters, kerning, style sheets, line numbers, page-layout view—Mariner Write touts its share of features.

Through DataViz translators, Mariner Write opens and saves in Word, WordPerfect, RTF, and SimpleText formats. This function is vital to Mariner Write's success, because users won't switch word processors unless they can read and write other file formats, specifically Word. Opening our Word files in Mariner Write was easy. They opened with dispatch, and the translation was accurate. However, saving files in a Word format and opening them in Word presented some formatting problems. Line spacing and font selection weren't always preserved, and sometimes the files were empty. Although we were unable to track down the source of the problem, it may have been an extension conflict. The translations worked fantastically on a PowerBook 170 with minimal active extensions.

Mariner Write is a perfect word processor for anyone with memory or hard drive constraints, or for PowerBook owners. Any useful program that occupies less than 2MB is quite an accomplishment. It's also powerful enough—and quick enough—to replace a desktop word processor. Take all that, add file translation and a great price, and Mariner Write is a winner. —David Reynolds



CAN YOUR DENTAL ADHESIVE DO THIS? Although Mariner Write doesn't have full page-layout capabilities, neither does Word, and it does darned well anyway.



BEAUTIFUL, TINY FOOTPRINTS: Especially for those on PowerBooks, Mariner Write's small RAM impact can be a godsend.



GOOD NEWS: Incredibly small hard drive and RAM footprints.

Program has terrific features for its size. Good use of hot help and AppleGuide. Highly customizable through AppleScript. Great price.

BAD NEWS: File translation not always reliable. Lacks some high-end features, such as a thesaurus.

reviews

Retrieve It! 2.5

DEVELOPER: MVP Solutions

CONTACT: 415-562-3457; www.mvpsolutions.com

PRICE: \$39 (street); free upgrade for Retrieve It! 2.0 users

REQUIREMENTS: 4MB of RAM, System 7 or later

Retrieve It! 2.5 is more than a mere maintenance release to the file-finding software reviewed in MacAddict's premiere issue. In this latest incarnation, Retrieve It! adds the ability to help you search the Internet by providing a simple interface and link to several of the Internet's best reference and search tools. The program works in conjunction with the most popular Web browsers: just choose from a pull-down menu the database you wish to search (such as Yahoo!, AltaVista, DejaNews, StockMaster, and others), enter your search term, and click Start. Retrieve It! will submit your query and the results will appear in your Web browser's window.

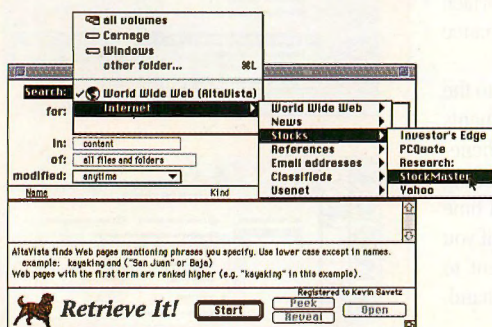
Retrieve It! offers quick access to several databases, but you're limited to the built-in search sites. You can use it to search the World Wide Web, recent news, classified ads, or news groups, and to look up stock quotes, e-mail addresses, and word definitions. Retrieve It! has connections to about 15 of the most popular search tools but leaves out dozens of other worthwhile ones. If the search site you want isn't built in, you're out of luck.

Using the program to search the Internet is far faster than going to a Web search page and entering your keywords directly, but using Retrieve It! will prevent you from accessing any of the sites' advanced search functions (such as searching by category, for example). The program's Internet search function may be useful for inexperienced searchers who don't know where to search or are intimidated by the plethora of options available. However, more advanced Internauts will find its limitations claustrophobic.

Retrieve It! still includes its excellent tools for searching your hard disk for lost or just buried files. Version 2.5 adds a few eagerly awaited features, including drag-and-drop access to the Finder. —Kevin Savetz



**FIND A
DEMO of
Retrieve It!
on The Disc.**



AND IT BARKS WHEN IT FINDS SOMETHING:
Retrieve It! does have a friendly face, but what do you expect from a company that has puppy mascots?



BAD Day On The **WEB**
?

The internet can be so cruel. One day you're golden – the bounty of the global village at your feet. The next day you have to slog painfully through page after page of dross hunting for information that's somehow disappeared. This will not do. Put an end to that static with Web Quick™, the elegant little 'smart bookmark' utility with automatic tracking. Web Quick makes sure if you found a page once, you can easily find it again.

Web Quick

www.europasoftware.com/spider



GOOD NEWS: Makes searching the Web as easy as pie.

BAD NEWS: Limited Internet searching functions will frustrate advanced users



reviews

Quicken Deluxe 7

DEVELOPER: Intuit

CONTACT: 800-264-5643; <http://www.intuit.com>

PRICE: \$59.95 (street)

REQUIREMENTS: System 7.1 or later, 8MB of RAM (CD-ROM drive necessary for Deluxe version)

Quicken does its job so well that, ironically, it's hard to justify an upgrade. It was easy to skip version 6 with its few revisions and the promise of online banking. For most of us the concept of online banking, in which a computer balances your checkbook, determines your credit card finance charges, and pays your electricity bill, ranks up there with videophones and the Jetson mobile.

Well, Quicken 7 (Q7) may not be as cool as the Jetson mobile, but it's eminently more useful. With a markedly improved interface and the ability to bank online, it minimizes most of your finance headaches, if not the service charges.

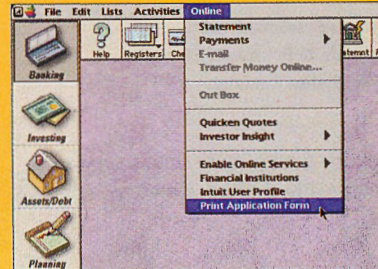
Earlier versions of Quicken were an obvious improvement to the way most people balanced their checkbooks and statements (which, in many cases, was not at all). It was like having the benefits of an anal-retentive accountant in your computer without having to put up with his annoying quirks. You may have had a hard time getting it to understand your budget, and it couldn't help you if you gave it the wrong information, but it was a big improvement to throwing your statements on the kitchen table and doing long-hand, often incorrect, arithmetic.

Quicken 7 has gone way beyond that. Its interface is so easy to use that a newbie with basic Mac experience can operate it *sans* manual. On loading, Quicken provides you with a sort of cyberblotter so that you're not distracted by your other desktop clutter. Using a vertical task bar first seen in Westcode Software's OneClick, Q7 divides itself into five Activity Areas: Banking (for checking accounts, savings accounts, and credit cards), Investing (for stocks, bonds, and mutual funds), Assets/Debts (managing loans, determining your net worth), Planning (budgeting and retirement planning), and Reporting (reports, graphs). No longer must you slog through your Visa register and stock portfolio to figure your 1997

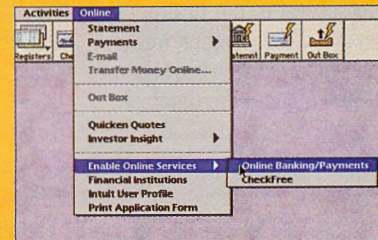
budget. With the click of one button, you can go back and forth between your different sets. And Q7 knows automatically which register belongs in which category, making it simple to divide your finances into logical categories, such as home vs. business.

Quicken also enhanced its registers. Q7 provides pop-up lists (as in ASD Software's PopUpFolder or Now Software's Now Utilities) of your categories so that you no longer have to jump from

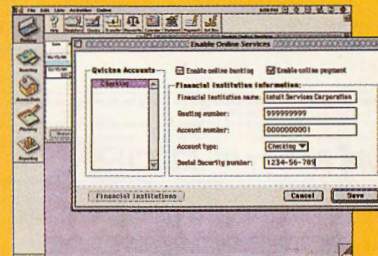
THREE STEPS TO SETTING UP ONLINE BILL PAYMENT



STEP 1:
Print out an application form. Fill it out and mail to Intuit. Wait for your welcome kit and *don't panic*.



STEP 2:
Under Online menu, open Online Banking/Payments in the Enable Online Services portion.



STEP 3:
Fill out the Enable Online Services information for each account you listed on your application. Save. Then follow Quicken 7's directions to set it up!

register to category window and back to locate the proper entry.

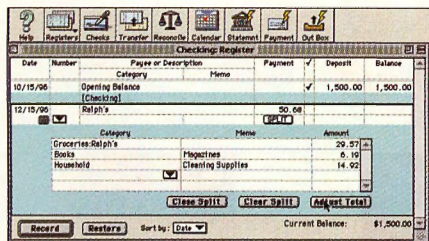
Wonderfully, Quicken's Split function, which allows you to divide a given purchase into different categories, is significantly smarter than the time-consuming and temperamental Split of previous versions. When opened, Split gives you three buttons to input the correct information with just a few clicks. It offers "clear split," "close split," and "adjust total." Diverging from previous upgrades, Q7's Quickfill function, which brings up an existing category with just a few letters, can now be disabled from the Preferences menu, in case you want to split your expenses in a new way. And the new calendar pop-up menu significantly speeds data entry for those of us who let our bills pile up before we enter them.

Yet Quicken's ability to do much of your banking online may signal an end to those piles of statements and bills. Actually, there are two components under the rubric of "online banking": online statement retrieval, which allows you to download bank statements and credit card statements from participating banks; and online bill payment, in which for \$5.95 per 20 transactions (less than a domestic stamp per transaction), Intuit sends your payment to a specified person or vendor.

The bill payment option is immediately more useful because it doesn't require your bank to be a participant. After printing and filling out a paper application from the Online menu and sending it to

Statement, Please?

- Check "Financial Institutions" in the Online menu to see whether your financial institution is a participant. If your bank isn't listed, call Intuit or check its Web site for updates.
- Don't forget to ask how much your bank charges per transaction. You are responsible for whatever charges are incurred.
- If a financial institution handles your checking and savings statements, don't assume that it handles your credit card statements as well. You must ask for each individual account to be sure.



QUICK SPLIT:
Quicken 7's new and improved Split function can automatically categorize expenses, determining how much you spent on what.



BUY! SELL! NO, WAIT, HOLD! Raise your hand if you love capitalism—and keep an eye on all the most valued stocks.

Intuit, you can authorize checks online. Intuit will forward the bill either electronically or via a paper check.

The online statement downloading is more problematic at this stage, only because the financial world isn't known for its cutting-edge technological advances. You need to call each of your accounts separately to find out whether they are participants. You also need to ask about the charges for having this service, because it varies. But once you get past all that, you can download your statement. And if you've input the information, Q7 will automatically match your input through date and/or check number.



GOOD NEWS: Quicken enables even the most financially challenged users to manage their money.

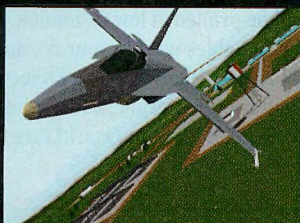
BAD NEWS: You're still required to pay your bills.

F/A-18 HORNET 2.0



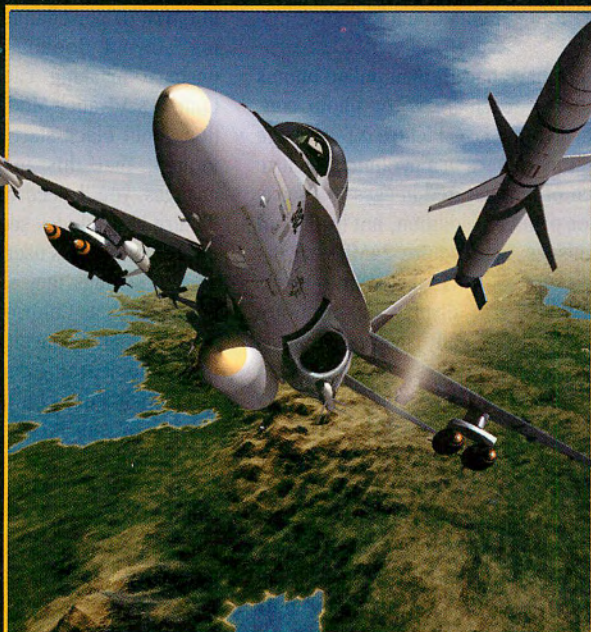
"...this is the finest flight-sim on the market!"

—Mac Action



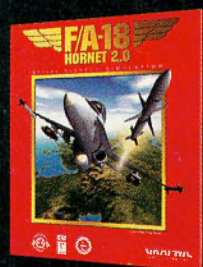
"If you want a modern flight sim, look no further."

—MacHome Journal



"The look and feel are top-notch..."

—Strategy Plus



F/A-18 HORNET 2.0
www.graphsim.com/graphsim



GRAPHIC SIMULATIONS CORPORATION



reviews

Live Picture XT

DEVELOPER: Live Picture

CONTACT: 408-464-4200; <http://www.livepicture.com>

PRICE: \$195 (srp)

REQUIREMENTS: Macintosh or Power Macintosh, QuarkXPress 3.32, 8MB of RAM (12MB recommended)



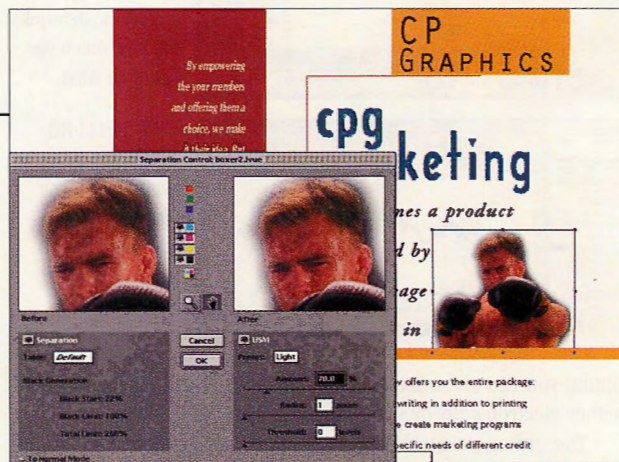
**FIND A
DEMO of Live
Picture XT on
The Disc.**

Live Picture (the company) attempts to bridge the gap between image editing and page layout with Live Picture XT (the software), a new photo imaging tool/extension for QuarkXPress. With Live Picture XT a designer can use high-resolution images in QuarkXPress without settling for the usual low-resolution screen previews and can preview at zoom levels well beyond QuarkXPress's maximum of 400 percent (up to an amazing 1,200 percent). In addition, Live Picture XT makes it possible to scale, rotate, and crop high-resolution images in QuarkXPress documents with no display quality loss. Live Picture XT also provides color-separation and unsharp masking controls within QuarkXPress that will satisfy anyone working in a professional publishing environment.

Working with Live Picture XT does require some adaptation. First, images need to be converted to the IVUE file format before importing. This is a simple enough task with Live Picture XT's extensive batch conversion capability that also handles formats such as TIFF, Photo CD, JPEG, and Scitex CT. Make sure, however, you have enough disk space prior to conversion, because the original file remains unaffected and the new IVUE file size will be equivalent to a CMYK version of the image. (Future releases of Live Picture XT will also incorporate Flash Pix technology, which has similar image advantages as IVUE for opening, manipulating, displaying, and printing images.)

Until now, QuarkXPress users have had to manipulate photos and images with fixed resolutions—each image or photo contained a fixed amount of information. Live Picture XT uses the company's IVUE technology to store images in a pyramid structure of escalating resolutions. Which of these stored images you see is determined by the zoom level or printer resolution, not by the full resolution (which, for some images, can require 24MB), so the

processing requirements to display or print are greatly decreased. This enables the images to display in real time regardless of the file size. As a result, you can combine images in a page layout with text and line art with greater precision than before. Printing IVUE images as color proofs also proceeds more quickly because only the necessary resolution data are sent to



RAGING BOX: This box is accessible from within QuarkXPress, so you can adjust color separation without launching a new application.

the printer, and no resampling from the original scan is required.

The best part comes when you reach the final preparations for output; you can choose separation tables and apply unsharp masking from inside QuarkXPress. (This is the ideal point in the work flow to deal with these steps.) Because the IVUE format allows you to keep your images as high-resolution, unsharpened RGB images until final output, there's no need to rescan images, even if you have changed aspects such as size, orientation, or color space. When printing, only the pixel data required by the printer resolution are sent, and once again, no resampling of images is necessary.

With most image-processing software, creating separation tables and applying unsharp masking is tricky. Live Picture XT's relatively easy-to-use Separation Control gives you a simple set of controls, access to separation tables, USM presets, and previews in CMYK or per channel. This makes the process a lot less daunting. Anyone looking for professional color-separation and unsharp masking capabilities will appreciate the Separation Control's Advance Mode feature, which provides detailed information about black start, black limit, and total ink coverage. Note, though, that this information cannot be altered—to make changes, you'll need to choose a different separation table. Live Picture XT includes several samples as well as LP Table Maker, a utility that permits users to create custom tables based on the separation settings they saved in other imaging or separation programs, such as ColorAccess, VISU Iciss, or Adobe Photoshop.

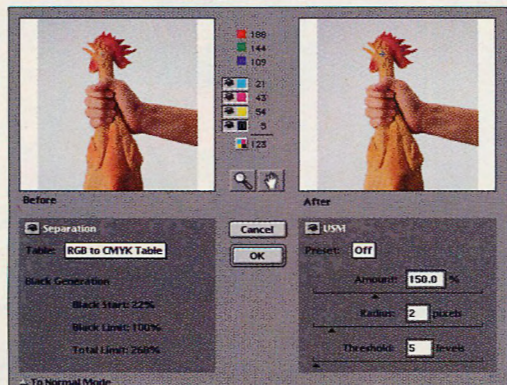
This is an extension that requires a bit of a commitment—not only is the learning curve steep, but also Live Picture XT must be installed on the computer from which the QuarkXPress file is printed, or your IVUE images will be printed at low resolution. You must also send along the separation tables used in your document to the your printer or service bureau—QuarkXPress's Collect for Output feature makes this easy, however. Despite this little extra effort, Live Picture XT is an excellent addition to QuarkXPress for most users. —*Ralph Seymour*



GOOD NEWS: Ability to repurpose imagery without having to rescan, sharpen, and reseparate.

BAD NEWS: There's a lot to learn.

NOTHING TO SHAKE A CHICKEN AT: Live Picture XT's interface performs fast scaling, zooming, and more in real time.



reviews



reviews

MD-4000 Micro Dry Printer/Scanner

DEVELOPER: Alps Electric (USA)

CONTACT: 800-825-2577; <http://www.alpsusa.com>

PRICE: \$699 (street)

REQUIREMENTS: 68K or PowerPC Macintosh, System 7.01 or later,
8MB of RAM, SCSI port

Scanners are cool, but as soon as you buy one, you instantly want a color printer. Likewise, as soon as you install that color printer and print a few charts or downloaded GIF files, if you're like most people, you'll look at your photo album and develop serious scanner lust.

Alps has taken care of both printer and scanner desire with the MD-4000. It's a printer and scanner in one. Hybrids of this sort have appeared before, but they generally don't work as well as springing for each unit individually. Luckily, the Alps MD-4000 doesn't fall into that category—it works well as a scanner and as a printer, with just a couple of caveats.

First, the printer. It uses four colored wax ribbons. True Mac addicts may remember this as the technology used in Apple's Scribe printer. The technology has come a long way since then (thank God), and the print quality is absolutely fantastic—as long as you use smooth paper. Unlike the ink used by inkjet printers, the wax that is laid down by the ribbons does not bleed (good), but it is very sensitive to paper smoothness (bad). Rough paper can degrade image quality to just above inkjet levels when printing on standard bond. The upside is that that paper you'd normally use to get good results with an inkjet provides nearly photorealistic results when used with wax ribbons. You can also do neat things with wax printers, such as make iron-ons and paper transfers (provided you have special transfer papers, which, of course, Alps also sells). The speed is about that of an inkjet (maybe a bit faster), and I found that ribbons lasted about as long (and cost about as much) as inkjet cartridges.

Second, the scanner. The scanner itself is a more-than-passable 600-dpi scanner that works via a TWAIN plug-in with Adobe Photoshop, or as a stand-alone scanning app. I was impressed with the scanning quality. The downside is that not only does your scanning material need to be flat as it



HERE'S THE THING: Although the MD-4000 footprint is larger than that of the average inkjet, it's smaller than a printer *and* scanner.

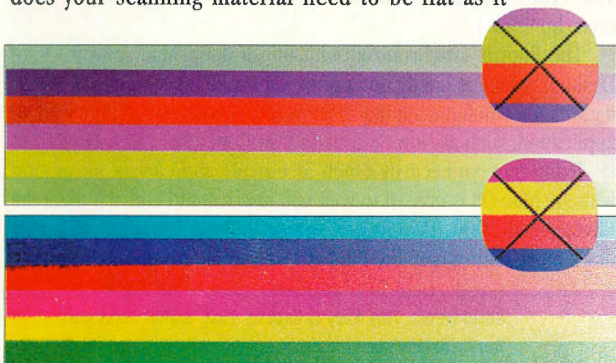
passes through the printer/scanner (so no scanning books or magazines unless you rip out pages), but also you must put your photo or document in a special feeder envelope before you scan. To me, those envelopes are just begging to get lost, and it can be hard to align things perfectly in the feeders.

I was able to get the MD-4000 up and running in about 10 minutes. The manual was totally idiotproof, and you don't even need to put the ink ribbons in any specific order (although, just to be anal, I put them in the correct CMYK order). If you'll be printing a lot of a particular color, you can even put in more than one ribbon of that color.

The Alps tech support team has a good reputation, although I had no need to test it during this review. My major complaint about the machine was that it failed the "cable test," by not including a SCSI cable (and terminator, because the unit is not self-terminating) in the box. What's a \$2 cable vs. the potential of superunhappy customers? I urge everyone to complain on their registration cards for every product that doesn't come with all the necessary cables.

Overall, the MD-4000 worked exceptionally well. The inability to scan non-flat items makes this a printer first and a scanner second, but as long as you're OK with that, you'll be very satisfied. And there is one really convenient bonus, too. Because this is a SCSI device, it won't claim a serial port, which is nice if you want to leave your laser printer and modem hooked up at the same time you use this machine. Probably the best way to let you know what I think of this printer/scanner is to say that as soon as Alps asks for the loaner back, I'm going out and buying one. For \$700, you get a fantastic color printer and a decent scanner. Very cool.

—Chris Charla



THE DRY LOOK, THE WET HEAD: Color from the Alps MD-4000 (top) is not as saturated as that from the Apple Color StyleWriter 2500 (bottom), but lines are sharper and there's no bleeding.



GOOD NEWS: Easy to use. Produces excellent results. Won't tie up a scarce serial port.

BAD NEWS: Scanning requires special envelopes, which could be easy to lose.



reviews

Pilot 1000/5000

DEVELOPER: US Robotics

CONTACT: 800-881-7256; <http://www.usr.com/palm>

PRICE: \$299 (srp)

REQUIREMENTS: System 7.1, 68030 Mac or better, 8MB of RAM

The Pilot is an electronic organizer with a built-in appointment calendar, to-do list, memo pad, and address book. Its software isn't revolutionary but offers two advantages over other organizers: its size and ease of backup.

The Pilot is tiny, just a bit bigger than an audiocassette and weighing less than six ounces. The screen is only 160 pixels square but very readable, and although there's no backlighting, the contrast is fine in well-lighted environments. A single pair of AAA batteries lasted for two months. Don't drop the thing, though—ours survived a couple of falls, but it lost all data after one of them.

The Pilot has no keyboard—as with the Newton MessagePad, you enter text directly onto the screen with a plastic-tipped pen, which is too small to be comfortable for lengthy entries but is adequate for notes. The Pilot uses Palm Computing's slick Graffiti software, which assigns a single-stroke gesture for every letter, number, and symbol. Expect to learn Graffiti in about half an hour, use it well in a couple of hours, and be up to speed in a week.

The Pilot is easy to back up via its HotSync cradle, which plugs into a Mac's serial port. Drop the Pilot into the cradle and press the HotSync button, and the data is simultaneously backed up and synchronized

with the Pilot Desktop software in a matter of two minutes.

In theory, it's that simple. In practice, it's messy if anything else is attached to your modem port, even if you have a serial switching box between the external modem and the Pilot. The HotSync software constantly polls your serial port, so you can't use the modem. You'll end up launching the HotSync control panel and turning on HotSync whenever you need the modem. It's more of a hassle to back up than a MessagePad with Apple's Newton Connection Utility.

If you're comfortable with a Mac, you'll easily learn the Pilot, which uses similar methods of selecting, deleting, copying, and pasting. Customizable shortcuts are available from a drop-down menu or by way of special Graffiti strokes.

The Pilot's built-in organizer consists of an appointment calendar, address book, to-do list, and memo pad, each accessible immediately via four buttons on the Pilot's face.



AND THE CRADLE WILL ROCK: The HotSync cradle doubles as a desktop stand.

(There's also a *really* ugly calculator, and third-party applications can be loaded.) Switching among applications is instantaneous.

The applications stand up well in comparison with most other electronic organizers, though not with Mac-based personal information managers (PIMs). The calendar application, for example, warns you of upcoming repeating appointments with a configurable alarm, but you can see the contents of appointments only in single-day view—the week view displays each entry as a blank gray bar, and month view shows nothing at all.

Entries within applications can be assigned to customizable categories, and a password-protected privacy option hides specified entries throughout the system. The Find command is fast and works systemwide. We'd welcome a few more bells and whistles, such as phone dialing through the speaker, alarms added to the to-do list, outline view in the memo pad, and the ability to hide and reveal entire categories.

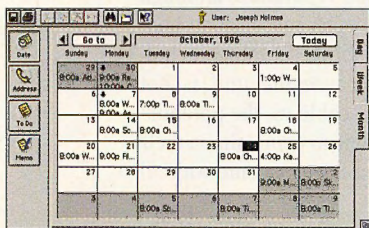
Unlike the Newton, the applications aren't closely integrated. If a reminder tells you to call Rusty, for example, you must switch to the address book and look up Rusty's number. On the plus side, every action is nearly instantaneous; much faster than on a MessagePad 130. (The new MessagePad 2000 promises to be far faster than older ones, however.)

The Pilot is synchronized with the desktop Mac software Pilot Desktop, which is handy but a poor substitute for a Mac PIM. A better solution would be a utility that could synchronize the Pilot with an application, such as Now Software's Now Contact or Claris Organizer.

If Internet connectivity (such as e-mail) and elegant integration with the Mac OS is crucial to you, you may want to take a look at the MessagePad 2000. However, if you're looking for a tiny, fast PIM that's more convenient, the Pilot is a keeper. —Joseph O. Holmes

SO I'M SUPPOSED TO BE WHERE?

The month view is a good way to see if you have appointments on a specific day but not *what* these may be.



Privacy Is Good

Don't think of the Pilot's privacy option as simply a way to hide sensitive information such as credit card numbers. It's also a good way to end Pilot screen clutter! If your datebook, for example, is crowded with repeating alarms, make them all private—you don't need to see simple reminders in your datebook. If you keep the addresses of 300 local restaurants in your contacts database, hide them all until you're hungry. Also, if you don't use the privacy option for truly private information, you can skip the optional password.



GOOD NEWS: Tiny. Easy to back up. Fast. Graffiti works well. Terrific battery life.

BAD NEWS: Software could be better integrated. Hardware is fragile. Desktop software is primitive. No AppleTalk for backup. Plug-ugly calculator.

reviews

Olympus CD-R2x4

DEVELOPER: Olympus Image Systems

CONTACT: 800-347-4027; <http://www.olympusamerica.com>

PRICE: \$499 internal, \$649 external (street)

REQUIREMENTS: 68030 or PowerPC, System 7.0 or later, 8MB of RAM, one free SCSI address

"Use of controls or adjustments or performance of procedures other than those specified may result in hazardous radiation exposure."

You have to respect a product with this kind of warning in its manual. And we do respect the Olympus CD-R2x4 compact disc recorder, but not just for the highly remote possibility of radiation exposure. For less than \$499 for the internal version (not recommended for Apple-branded Macs because its bezel is not Mac-standard; it will, however, work in Power Computing, SuperMac, and other Mac clones) or \$649 for the external version, you, too, can create your own CD-ROMs.

The CD-R2x4 records CD-ROM discs at 2X speed and plays them back at 4X speed. (The burn speed affects only how fast the disc is made; once burned, the disc can be played in any speed CD-ROM.) A true multiplatform peripheral (Mac, Windows 3.1, Windows 95), the CD-R2x4 can burn CDs in several formats, including Mac HSE, ISO-9660, CD Extra, and hybrid formats. The device can also record audio CD tracks or digital audio in one of several formats. (Tracks from another audio CD must be recorded in the first session on a given disc.)

Put through its paces, the CD-R2x4 proved up to task. The peripheral was reliable and relatively quick (taking less than an hour to record, verify, and finalize a CD-ROM), and all of the discs recorded with the peripheral worked perfectly immediately after the burn.

Creating a CD-ROM is considerably more difficult than copying files to a hard drive. That's why the CD-R2x4 comes bundled with Corel CD Creator. CD Creator uses Wizards to walk you through the creation of a CD-ROM. Although these are quite helpful for a novice user, they quickly become annoying



BURN, BABY, BURN: You can spark your own CD-ROM inferno with Olympus's recorder, but watch the rads.

as experience is gained. Unfortunately, once the Wizards are turned off, there's not a lot of other information available about CD Creator.

The manual, perhaps because it divides space among Macintosh, Windows 3.1, Windows 95, and Windows NT platforms, devotes a paltry 32 pages to the Mac version of the program. Online help is available, but it is limited in scope. For example, we couldn't find any information on how to create a bootable CD-ROM. Fortunately, the CD-R2x4 is supported by Astarte's Toast as well as Adaptec/Incat Easy-CD and Elektrosen's Gear, so you can choose your own recording software.

The CD-R2x4 performed without a hiccup. Setup was easy, operation was flawless, and the device seemed rugged enough to withstand a lot of wear and tear. If the bundled software were as good as the hardware (even if the documentation were as good), the package would be fantastic. As it stands, it's pretty darned good, threat of hazardous radiation and all. —David Reynolds

GOOD NEWS: Good price. 1MB buffer. Easy to set up.

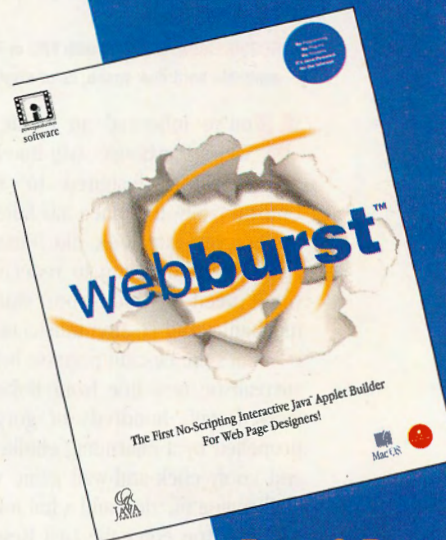
Rugged construction.

BAD NEWS: Bundled software only adequate. Documentation contains lots of extraneous Windows/Windows 95 information.



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reviews

9: The Last Resort

DEVELOPER: Tribeca Interactive, distributed by GT Interactive

CONTACT: 212-726-6500; <http://www.gtinteractive.com>

PRICE: \$50 (street)

REQUIREMENTS: 68040 with FPU or PowerPC, 16MB of RAM, 15MB of available hard disk space, color display, 2X CD-ROM drive

You've inherited an exotic artist's retreat, an ornate Pee Wee's Playhouse-style hotel equipped with a fabulous Muse Machine designed to restore the creative impulse. Unfortunately, the place has fallen into disrepair, and a couple of poltergeists that look like Cusano Rojo worms have taken up residence and begun to redecorate. In order to save the joint, you'll need to build your skills as a custodian, disc jockey, mechanic, and session musician.

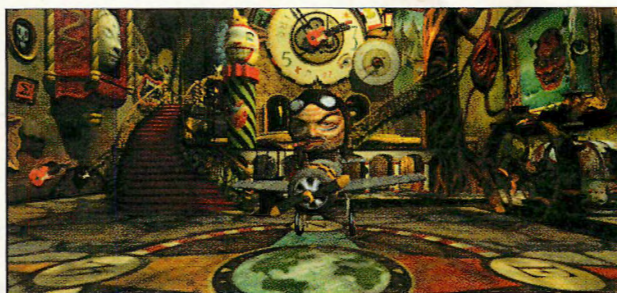
That's the fanciful premise behind 9: The Last Resort, a playful, surrealistic new title from Robert De Niro's Tribeca Interactive. Packed with hundreds of gorgeous hand-painted images and propelled by a charming, ebullient soundtrack, 9 is a slick, cool, and goofy click-and-wait game with some nifty original touches, challenging puzzles, and a fun musical angle.

Once you enter the Last Resort, you'll explore, then find and solve puzzles. The game is sort of like Freak Show meets the Daedalus Encounter, with a double shot of recombinant postmodern ambiance. You must hone your drum-programming chops with the aid of the Tiki Bongo God, learn to decipher and perform cryptic musical passages on the keyboard, build a bass guitar from spare parts, win a slot car race, and solve myriad other puzzles. Your final goal is to reassemble the far-flung parts of the Muse Machine and defeat the evil Twins, whose voices are supplied by Aerosmith's Steven Tyler and Joe Perry.

Rumor has it that 9 was developed from the aftermath of an aborted Aerosmith multimedia project, and sadly, their stilted character voice performances, plus those of fellow ex-celebs Cher, Christopher Reeve, and James Belushi, are the only aspects that detract from this otherwise sterling effort. The rest of the audio elements—especially the voice of the Drum God, reportedly that of one of the programmers—are not only smooth but also utterly endearing.

There are lots of things to find and do in 9, and the puzzles are somewhat difficult. You can easily suss out much of the game by just mousing around in the 360-degree world, and the characters offer

MEET ME AT TRADER VIC'S: You gotta get the beat, man, to beat the Drum God, and you'll have to beat him, or else.



PERHAPS YOU KNOW MY BROTHER—HE HAD TALENT AND A BODY, too: James Belushi's is just one of the 'real star' voices winding in and out of this hallucinatory haunt.



HE AIN'T A GRUB, HE'S MY BROTHER: There's no particular reason for some of the more gruesome creatures in this game, but they do add ambiance, don't you think?

some useful clues; but other parts are fairly daunting. Here are a few tips that should enhance your gameplay (those of you who don't believe in cheating, or who are so hard-core that you don't need help, skip to the next paragraph):

- If you can't get in the front door, check the envelope with the "will" that accompanies the CD-ROM.
- The Voodoo Mask display in the Drum Room is a puzzle—similar masks want to be near each other, and they'll giggle when they're in the right order. The solution reveals a clue you'll need to repair the jukebox in the next room.
- The door with the sound-effect hot spots is a concentration game. Click on the matching pairs to get through to the Muse Machine.
- Once in the Dali Room, you'll need to tune Lucille's strings. Make sure you've read that "How to Play Guitar" book in the Tapestry Room.
- To get into the final scenes, you'll need to play sequences on the monkey's organ from notation found in four different rooms.

The game 9 balances the Myst-derived enigma-ware concept with the sheer dopey fun of hearing neat sounds when you click on-screen, all wrapped up in a lavish piece of art direction. It's the grooviest Made-With-Macromedia-Director game yet, and although it's not an action-packed twitch-fest, the combination of artsy tomfoolery, good-natured pseudomysticism, and K-A rated brainteasers give 9: The Last Resort all the markings of a prestigious cult hit.

—Todd Souwinger



GOOD NEWS: Lush art direction. Excellent interactive sound design. Intriguing puzzles.

BAD NEWS: Character voices by burned-out ex-celebrities.

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reviews

Apache

DEVELOPER: Interactive Magic

CONTACT: 919-461-0722; <http://www.imagicgames.com>

PRICE: \$49.95 (street)

REQUIREMENTS: Power Mac, System 7.5, 25MB of RAM, CD-ROM drive, 12MB of hard drive space (Thrustmaster or Flightstick recommended)



FIND A
DEMO of
Apache on
The Disc.

Helicopters are generally harder to fly than airplanes, but not so in Apache, Interactive Magic's latest flight sim. As a matter of fact, the flight model is probably the weakest point in an otherwise excellent sim.

Apache leans more toward arcade than the realism of ParSoft Interactive's A-10 Cuba!, with more shoot-'em-up action than in Graphic Simulations' F/A-18 Hornet. What Apache lacks in a flight model, though, it makes up for in weaponry. Hellfire, Hydra, Stingers, and a chain gun mixed with laser designation, heads-up displays, and countermeasures make for fast-paced, complex fighting.

The game has two modes—arcade and realistic. In the first, your chopper is easier to fly (and practically impossible to crash), but the enemy is just as deadly. In realistic mode you have full aerobatic control and can fly loops and rolls, or anything a real Apache can do. Full heads-up displays are in both modes as well as internal, external, and missile-in-flight views.



IT MAY TAKE YOU A DAY or two just to figure out what everything in the heads-up display means, but it'll help you in flying the thing. Those contrails are from Hellfire missiles about to toast enemy AAA.

One of Apache's unique features allows two to fly in the same helicopter via modem or network—one pilot and one gunner, just like the real Apache. Or two Apaches fly together against the enemy, or in head-to-head combat. On a network up to 16 people can get a piece of the action.

Stability is good but not great, and more Mac-like dialogs and docs would also be nice—the interface is more Win95 than Win95 itself. The manual's loaded with acronyms, too, which is good for realism but makes for a stiff learning curve. These minor issues aside, the final word is fun. Apache is a good shoot-'em-up and complex enough to keep any pilot on his or her toes. —*T. Kelley Boylan*



GOOD NEWS: Very cool armaments. Satisfying contrails and explosions from guided missiles. Good networking and modem play.

BAD NEWS: Weak flight model. Ugly Windows-port interface. Steep learning curve for limited realism. Terrible, terrible installer.

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reviews



reviews

Capitalism

DEVELOPER: Interactive Magic

CONTACT: 919-461-0722; <http://www.imagicgames.com>

PRICE: \$49.95 (srp)

REQUIREMENTS: 68030 or better processor, 4MB of RAM (8MB recommended), color video, 2X or better CD-ROM

Capitalism bills itself as the strategy game of money, power, and wealth. We'll buy that. More business than game, Capitalism lets you run a corporation by managing sales, purchasing, manufacturing, inventory, private labeling, and advertising.

Capitalism offers eight instructional/tutorial games, 17 predefined scenario games, and open-ended games. In all cases you play against computer competitors that have distinct personalities and differing expertise; you can also select difficulty levels ranging from Very Easy to Hardest.

The object of the game is to build a corporation. You must then staff them, create functional units (such as purchasing, sales, and inventory) within them, and manage advertising, training, and research and development spending—all while paying close attention to supply and demand and the actions of your competitors. You begin each game with \$10 million, and you can raise additional capital by borrowing from the bank or issuing new stock. You can also buy stock in other firms, participate in mergers, and tender offers or takeovers.

As in most sims, Capitalism requires you to invest hours to become proficient, even if you already have a basic understanding of business strategies and tactics. Fortunately, the eight instructional games are well designed and introduce every concept you need to play. Alas, although the 100-plus-page manual is generally informative and clearly written, the small and frequently illegible screen shots are inexcusable. You'll have to read it carefully,

perhaps several times, to triumph. Still, Capitalism is a richly detailed and realistic simulation. If you have the time and an interest in how business works, Capitalism will provide hundreds of hours of intense, enjoyable competition. —*Bob LeVitus*



IT WILL TAKE YOU weeks to figure out what all the little buttons and graphs mean, but once you do, the simulation is relatively accurate and mostly enjoyable.



FIND A DEMO of Capitalism on The Disc.



GOOD NEWS: Realistic and detailed simulation is as close to running a real business as a computer game can get.

BAD NEWS: Managing the dozens upon dozens of details can be confusing. Manual has horrible graphics.

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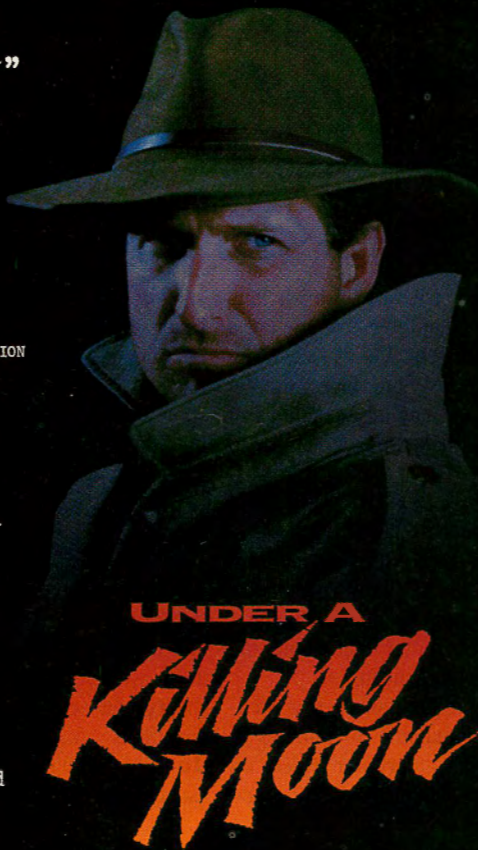
—CD-ROM TODAY
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“Long into the night (I was) desperate to find each clue and explore every venue, utterly oblivious to the passage of time.”

—HOMEPC

“The first game to provide a ‘go-anywhere’ realistically rendered 3-D environment.”

—USA TODAY



UNDER A KILLING MOON

UNDER A KILLING MOON—It's December 2042 and Tex Murphy, the last of the old-style PIs, has hit rock bottom. Then a priceless statuette is stolen. From the shadowy back streets of post-apocalyptic San Francisco come rumors that an ancient evil, foretold by prophecy and worshiped by and ancient blood cult, has mysteriously reawakened.

When Tex is hired to find the statuette he plunges into a labyrinth of deceit, manipulation and murder. He'll need all of his PI instincts and every ounce of Murphy savoir faire to resist the seduction of darkness and stop the forces of evil—before the terrifying prophecies become reality.

Under a Killing Moon stars Brian Keith (Hardcastle & McCormick, The Parent Trap), Margot Kidder (Superman I, II, III), Russell Means (The Last of the Mohicans, Natural Born Killers), and features the voice of James Earl Jones (Star Wars, Field of Dreams, The Lion King).



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cd-roms

THE CROW ■ OCEAN LIFE: THE CARIBBEAN ■ WORLDWIDE AUTO GUIDE ■ ANIMALS IN DANGER ■ COREL ALL-MOVIE GUIDE 2

Once again the good, the bad, and the ugly wound up on our doorstep. The database kings at Corel brought us two titles, one a winner and the other, well... not. If you're a car buyer, you'd be better off consulting a book than Corel's disc,

but if you're just looking for a movie, Corel has the CD-ROM for you. Animals also abound this month. Take a trip beneath the sea, check out how many endangered birds live in your own backyard, or get a cinematic view of "The Crow." —Joe Mahr

The Crow: The Complete Interactive Collection

PUBLISHER: Graphix Zone
CONTACT: 800-828-3838;
<http://www.gzone.com>
PRICE: \$30 (street)
REQUIREMENTS: 2X CD-ROM,

System 7.01 or later, 68040 or better, 5MB of RAM



Pretty superficial, that is. Say you want to learn the real cause of Lee's unusual death, and you want the details, not some candy-coated explanation you've already heard a thousand times on "Entertainment Tonight." Guess what? In this incomplete collection, you only learn that the death was... "tragic."

Eager worshippers will be even more disappointed when they kneel down at "The Brandon Lee Shrine" (their words, not ours) to find only a four-paragraph bio on their ill-fated idol. No pictures of Brandon swinging as a tot. No exclusive interview with Cousin Ernie. No reason to buy this disc.

Even if you loved the movie, own all of the comic books, idolize Brandon Lee, and can remember the name of that guy who replaced him in the sequel, you won't want this collection of Crow crud.

The title begins with a crow flying into an abandoned cathedral, which turns into your interactive center. You can twirl around with panoramic QuickTime VR to choose any of 11 subjects based on the film and comic books. It's pretty.



THIS BIRD OF ILL OMEN has nothing to crow about.

The Last Words:

Mark: Even if you loved "The Crow" as much as I did, this superficial disc has nothing to offer. Spend your \$30 on the compiled comic and the nifty book "The Crow: The Movie," a much better behind-the-scenes guide.

Judy: Run away! Run away! This may just be a "fans of The Crow" thing. The interface is strange. It just makes very little sense.

Joe: The cursor is even a little flying crow. Can someone pass the cheeeese?

Ocean Life: The Caribbean

PUBLISHER: Sumeria
CONTACT: 415-904-0800;
<http://www.sumeria.com>
PRICE: \$49.95 (srp)
REQUIREMENTS: 2X CD-ROM,
System 7.0 or later, 68040 or better, 8MB of RAM



DIVE IN—the disc is just right for deep-sea viewing.

Sumeria won't have to fish for long to reel in compliments on the latest underwater sequel to its Ocean Life series. A quick, easy interface; simple, catchy graphics; and copious quantities of QuickTime movies make this a great way to get your sea legs.

Granted, you have to actually care about Caribbean ocean life to really enjoy the disc. The narrator sounds like the teacher from "Ferris Bueller's Day Off." (You're just waiting for him to begin droning, "Bueller... Bueller.") And let's not forget about the price—fifty bucks ain't cheap.

But for the money, you get a well-researched disc containing 50 minutes of original, narrated, underwater video on more than 200 species of marine life. And

you know it wasn't slapped together in some basement lab by kids cribbing from an encyclopedia. Additional info including tidal patterns, prime (and not-so-prime) diving spots, maps, and fish taxonomy round out the title.

The Last Words:

Mark: Although you don't get as much detail as you would from a televised nature documentary, it makes for a pleasant browsing experience. I'm also impressed that they're prepared to bad-mouth some of the more overrated diving areas.

Judy: An octopus' garden for sure! This disc floats way above the rest.

Joe: The \$50 question is: Just how interested are you in Caribbean fish?

Worldwide Auto Guide

PUBLISHER: Corel

CONTACT: 800-455-3169;

<http://www.corel.com>

PRICE: \$24.95 (srp)

REQUIREMENTS: 2X CD-ROM,

System 7.1 or later, Macintosh LC III or better,

8MB of RAM



compare makes and models interactively instead of paging through auto guides or (gasp) talking to salespeople. Too bad you can't really do that with the pathetic searching capabilities and haphazard collection of facts included in this guide. For example, if you want to check out all of the four-doors priced below \$15,000 and compare their gas mileage, you'll have to search out each car and do your own math.

Once you finally scrounge up all of the data you can find, you have to wonder if it's even accurate. Consider a 1996 Honda Civic four-door. After the

usual 30-second load time, the disc claims you can pick one up for \$9,000. Go to your nearest Honda dealer and mention that gem. They'll snicker and point you to the used car lot, where you can trade in this CD.

The Last Words:

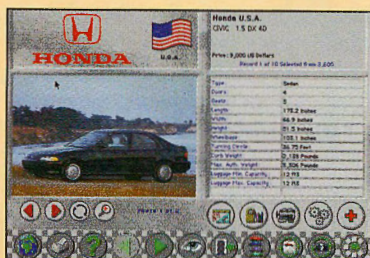
Mark: Wow, this is pretty lame. It's total shovelware.

Judy: Good concept. Difficult interface. Help button and screens are completely unhelpful. No listing for Cheryl's Miata—she will be so surprised! Auto photos are totally uninspiring. Stick with the bound books, even if it means forgoing photos of each make.

Joe: For \$25, you're not expecting much. Well, lower those expectations more, maybe to the \$10 range.

Slower than a Pinto, shoddier than a Yugo, and about as useful as a Model T, this auto guide should be driven directly to the junkyard.

Sure, a database of new cars is a handy idea. In fact, it would be a real timesaver to



THIS SCRAP HEAP smells like a lemon.

Animals in Danger

PUBLISHER: REMedia

CONTACT: 800-83-MICRO;

<http://www.remedia.com>

PRICE: \$29.95 (srp)

REQUIREMENTS: 2X CD-ROM,

System 7.0 or later, Macintosh LC or better,

4MB of RAM



reside (or used to) in your state or region. Watch these animals eke out their existence in a few QuickTime clips while a narrator explains just how bad they have it.

You may wonder, though, just who is worse off as you try to make your way around the unwieldy interface. An annoying lack

of hyperlinked cross-references makes getting anywhere a chore.

And the disc offers detailed information on only about 10 percent of endangered species. (It lists the rest.) The advice it gives to would-be activists is laughable.

The "projects" section advises writing an article for the local newspaper about how elephants are threatened, including a photo, stats, and an "imaginary interview with a game warden."

The Last Words:

Mark: Information-rich. Besides video lectures, exercises, and descriptions of animals, you get a nifty searchable database that lets you find endangered animals in any region of the world—even your own backyard.

Judy: Lots of options, but it's all on the desktop at the same time. QuickTime movies are there but not particularly stunning. System is a little slow to respond.

Joe: No matter how much you wish it was good, it just doesn't cut it.

Animal activists can catch up on the plight of about a handful of troubled species found in the 11 different habitats featured on this disc. To get involved locally, you can also search the database to find which of the 1,000 troubled species



INTERFACE endangers disc's survival.

Corel All-Movie Guide 2

PUBLISHER: Corel

CONTACT: 800-455-3169;

<http://www.corel.com>

PRICE: \$29.95 (street)

REQUIREMENTS: 2X CD-ROM,

System 7.1 or later, 68030 or better, 8MB of RAM



played the Cook County clerk in the 1980 cult flick "The Blues Brothers." Spielberg earned third from last billing, outranking only the model Twiggy, who played the Chic Lady, and Steven Williams, who played Trooper Mount.

Thanks to this disc, now you can be the

biggest movie nerd on your block. To get there, you may have to wrestle a clunky interface, but hey, if you're spending your Saturday night trying to figure out how many cops Ed Asner has played, you've probably got the time.

The Last Words:

Mark: My only quibbles are with slow performance and lack of bylines. If I can't tell whose opinion I'm getting, I'm sticking with Roger Ebert's tome for my movie recommendations.

Judy: Showing a different clerk behind the counter at each visit is a friendly detail. Unfortunately, the interface is pretty darn Windoid-like.

Joe: Seems the only problem, albeit a small one, lies in navigating the navigator.

Better than Blockbuster but less scintillating than Cinemania, this refined reference stores film facts on more than 100,000 movies, all heavily cross-referenced with biographies on actors, directors, and other movies.

Forget the name of a film? Try searching by genre or time period and chances are you'll find it. If you like a movie, you can mark it and search for similar flicks, with ratings attached.

Oh, the trivia you'll know. In a matter of seconds you can learn that Steven Spielberg



MOVIE GUIDE REELS with reviews and trivia.



Kidz Stuff

Brisbane Elementary School MacAddicts give you the goods on the latest kids' software.

reviews

Let's Pretend! Many Lands, Many Playgrounds

PUBLISHER: Mind Magic

CONTACT: 800-444-2524; <http://www.mindmagic.com>

PRICE: \$19.95 (srp)

REQUIREMENTS: 2X CD-ROM, System 7.0 or later, 68030 or better, 8MB of RAM



TRAVEL THE WORLD with a firefly guide to light the way.

Dust off your passport—Flash the Firefly is back in the attic and itching for adventure. You'll tour nine nations from Brazil to Sweden to Tanzania in this point-and-click

introduction to international travel. Random clicking on any of the image-laden screens will treat you to a slew of cool cultural tidbits about each country and a sampling of foreign words that are spelled out and pronounced for beginners.

GOOD FOR GRADES: 1 to 4

LIKES: "It was fun to go to different places, see their cultures, and learn the words." ■ Rachelle

"It teaches you about different places in the world. It shows you famous people there and what animals live there, too." ■ Rebecca

DISLIKES: "Well, I think some of the things, like the pots, tables, animals, etc... well, I think some of the things were lame." ■ Katie

"It doesn't have a lot of things to look at for each country.

It doesn't let you explore that country. I liked everything else." ■ Hilary

SOUND ADVICE: "This program does not need improving, because I liked it." ■ Alfonso

FINAL REPORT: Flash the Firefly holds international appeal.



FIND A
DEMO of
Let's Pretend!
on The Disc.

Meet the players...



EMILY HANDA, Age 10, Grade 5
EXPERTISE: Sports
PICK OF THE MONTH: Chess Mates



HOLLY MILLER, Age 10, Grade 5
EXPERTISE: Soccer
PICK OF THE MONTH: Hollywood High



KATIE TWOMEY, Age 10, Grade 5
EXPERTISE: Drawing
PICK OF THE MONTH: Hollywood High



ALFONSO PICAZO, Age 10, Grade 5
EXPERTISE: Sports
PICK OF THE MONTH: Hollywood High



RACHELLE DANIELLE, Age 9, Grade 5
EXPERTISE: Drawing
PICK OF THE MONTH: Hollywood High



HILARY WALDO, Age 9, Grade 5
EXPERTISE: Soccer
PICK OF THE MONTH: Hollywood High



REBECCA WALDO, Age 9, Grade 5
EXPERTISE: Theater
PICK OF THE MONTH: Hollywood High



ERIC GRIFFIN, Age 10, Grade 5
EXPERTISE: Sports
PICK OF THE MONTH: Hollywood High

Green Eggs and Ham

PUBLISHER: Living Books

CONTACT: 800-397-4240; <http://www.livingbooks.com>

PRICE: \$29.95 (street)

REQUIREMENTS: 2X CD-ROM, System 7.0 or later, 68030 or better, 8MB of RAM



Green eggs and ham may not be your idea of a tasty treat, but this CD-ROM serves up an appetizing Seuss in a well-done interactive storybook. Older kids will probably get bored with the preschool program as it rhymes aloud the story to beginning readers, but the young ones will enjoy the silly moral as well as



KIDS WILL LOVE IT here or there, kids will love it anywhere.

the animations and games scattered throughout.

GOOD FOR GRADES: Preschool to 3

LIKES: "I liked that this program is good for reading; it teaches you how to read." ■ Alfonso

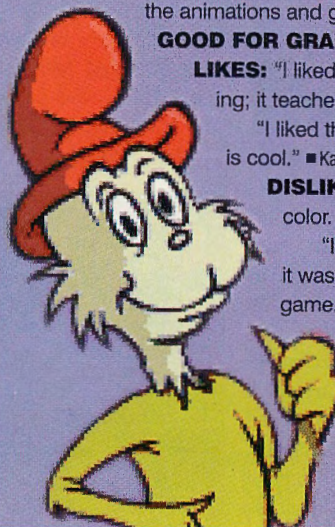
"I liked the song that Sam sings, because it is cool." ■ Katie

DISLIKES: "One thing I don't like is the color. I also don't like their voices." ■ Emily

"I did not dislike anything, because it was fun and easy. It was a really neat game." ■ Rachelle

SOUND ADVICE: "I would not change anything. It's perfect the way it is. I even loved it." ■ Hilary

FINAL REPORT: This dish will never go bad.



Chess Mates

PUBLISHER: Brainstorm

CONTACT: 888-4BRAINS; <http://www.brainstormfun.com>

PRICE: \$29.95 (street)

REQUIREMENTS: 2X CD-ROM, System 7.0 or later, 68030 or better, 8MB of RAM



THIS CHESS GAME is fit for a king.

Whether you're a chess king or a mere rookie, Wigby the Wizard of Chess and his unruly assistant, Wanda, will keep you ahead of your game. For newbies, Wigby offers a simple yet solid tutorial that teaches the basics in nothing flat. If you

already have a good grasp of the game, you can skip ahead to learn some sneaky tactics or go straight into gameplay. Ten levels of difficulty and seven different types of puzzles keep gamers from getting bored.

GOOD FOR GRADES: 2 and up

LIKES: "I like how if you make a mistake, the game piece will go back to where you were." ■ Alfonso

"If you need help on a move, you can click on the wizard and he will tell you a good move." ■ Rachelle

DISLIKES: "There is nothing I don't like. Now I can beat my dad. This game teaches you strategy." ■ Hilary

"I did not like that the other opponents were so easy to beat." ■ Eric

SOUND ADVICE: "I don't think anything needs to be improved in this game, because it has instructions and all!" ■ Rebecca

FINAL REPORT: Tough-to-top chess game makes all the right moves.

Kids Arcade Pak

PUBLISHER: MacSoft

CONTACT: 800-229-2714; <http://www.wizworks.com>

PRICE: \$19.99 (street)

REQUIREMENTS: 2X CD-ROM, System 7.0 or later, 4MB of RAM



Get your young kids hooked on video games at an early age with MacSoft's hodgepodge of five fun arcade games. MacMan Kid (sounds like PacMan... looks like PacMan...), Garlic Press Pinball, PegLeg for Kids, Gumballs, and Diamonds for Kids (glorified Breakout) will keep your kids locked in mindless gaming mode until shutdown. Big buttons and bright colors make it the perfect starter kit for the youngest of gamers, but the babyish voice cues may turn off a more mature audience.

GOOD FOR GRADES: 2 to 5

LIKES: "The games were easier than regular ones, like PacMan—MacMan is slower and easier for littler kids." ■ Rebecca

"The games are right out of an arcade, there's quite a variety of them, and the games are easy to understand." ■ Hilary

DISLIKES: "I didn't like how the pinball was so complicated

at the beginning—you couldn't find out how to swing the sticks." ■ Eric

"I did not like the fact that it does not have instructions." ■ Alfonso

SOUND ADVICE:

"In one of the games a little girl screams, and I don't like that very much. I would take that out!" ■ Katie

FINAL REPORT:

Kids will love getting back to these basics.



NEW PLAYERS TAKE IT SLOW with this collection of classic kiddie arcade games.

Mario's FUNDamentals

PUBLISHER: Brainstorm

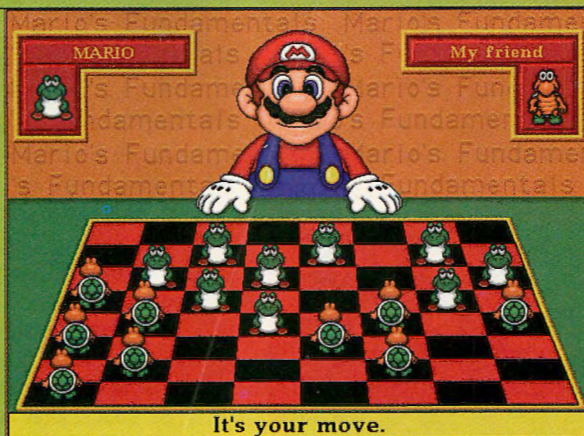
CONTACT: 888-4BRAINS; <http://www.brainstormfun.com>

PRICE: \$29.95 (street)

REQUIREMENTS: 2X CD-ROM, System 7.0 or later, 68040 or better, 7MB of RAM



Two-player games are no fun when there's only one of you, so Brainstorm decided to pit you against that cheesy Italian, Mario, in five traditional games: checkers, Go Fish, dominoes, backgammon, and Yacht (some would be tempted to call it Yahtzee). The games are fun if you can stand Mario's running commentary ("Jamaica me cuckoo!"), but kids looking for a consultant will have to hit the manual, because Mario is a player, not a teacher. The on-screen tutorials to all of these games are oversimplified, read-me-style directions that do little to help young beginners.



THESE FUN GAMES require a natural-born sense of the directions.

GOOD FOR GRADES: 1 to 4

LIKES: "I like the different games. I like it when Mario talks to you and does different tricks." ■ Holly

"I liked everything about this game, because it was entertaining. Also, lots of fun." ■ Emily

"It was fun to play the different games that it had to offer. I would recommend this game." ■ Rachelle

DISLIKES: "I do not like that Mario talks too much and that his voice is annoying." ■ Alfonso

"It did not teach you how to play the games. It gets confusing when you don't know how to play." ■ Hilary

"If you do not know how to play the games, it is hard, because it does not teach you—it just lets you play against Mario." ■ Rebecca

SOUND ADVICE: "I would make different levels of hardness for different grades." ■ Eric

FINAL REPORT: Mario should get a teaching degree.

Hollywood High

PUBLISHER: Theatrix

CONTACT: 800-955-TRIX; <http://www.theatrix.com>

PRICE: \$29.95 (street)

REQUIREMENTS: 2X CD-ROM, System 7.1 or later, 68030 or better, 8MB of RAM



This spinoff of Theatrix's popular Hollywood animation software for kids comes loaded with more than 25 cartoon backgrounds and 10 kooky characters that you direct in your own animated movies. Characters range from goody-goody, bungee-jumping whiners to quivering, poetry-reading rug rats, at your discretion. Stuck for ideas? The Idea Machine offers hilarious story starters, ridiculous plot twists, and smart-aleck quips that glamorize high school years in true Hollywood fashion.

GOOD FOR GRADES: 4 and up

LIKES: "You can change the settings, and if you type in something like 'Hi' or 'Nice to see you,' the characters will say it." ■ Rebecca

"I liked everything, because I like making movies and this is teaching me to be a director and a scriptwriter." ■ Hilary

DISLIKES: "I didn't like that the characters' voices were so screechy and annoying." ■ Eric

"I do not like the fact that the characters do not speak like a teen." ■ Alfonso

SOUND ADVICE: "I would put in more characters and backgrounds and change nothing else." ■ Holly

FINAL REPORT: Angst-free animation makes high school look cool.



THE RUNAWAY HIT of the season left young directors starry-eyed.

Amazing Math

PUBLISHER: Brighter Child Interactive

CONTACT: 614-847-8118; <http://www.brighterchild.com>

PRICE: \$29.95 (street)

REQUIREMENTS: 2X CD-ROM, System 7.1 or later, 68040 or better, 8MB of RAM



Spiderman, She-Hulk, Wolverine, and Iron Man give up crime-fighting to take on math problems in four violent, clunky games. Your goal in almost every game is to shoot down the correct answers to math problems ranging in subject from addition to geometry. The superheroes just shoot, they don't explain anything. To find out how to solve the math, you're forced to read dull directions.

GOOD FOR GRADES: 3 to 7

LIKES: "I liked that the game had different levels for different grades." ■ Eric

"I didn't like anything. I hated it. It is too violent." ■ Holly

DISLIKES: "The games had no instructions, so I did not know how to play. Even my mom thought it was hard to understand and violent." ■ Hilary

"It teaches you more about fighting than math." ■ Rebecca

SOUND ADVICE:

"I would take out the violence and put in more education, such as math."

■ Alfonso

FINAL REPORT: Even superheroes can't save this game.

FLIPPING FLASHCARDS would be more fun.



Wishbone and the Amazing Odyssey

PUBLISHER: Palladium Interactive

CONTACT: 800-910-2696; <http://www.palladiumnet.com>

PRICE: \$39.95 (street)

REQUIREMENTS: 2X CD-ROM, System 7.1.1 or later, 25MHz 68040 or better, 8MB of RAM



Wishbone, the TV dog star, gets sucked into his combobulator and transported back to ancient Greece, where he must feign Odysseus in this epic adventure game based on Homer's classic tale. Help Wishbone fend off witches, giants, and gods on his journey back to Ithaca. Or give up on the tedious gameplay, annoying repetition, and slow-moving scenes and read the book instead.

GOOD FOR GRADES: 4 and up

LIKES: "Sometimes [Wishbone] said cute lines, but I really didn't like this game, no matter what other reviewers say about it." ■ Rachelle

"It was interesting at the beginning. The voices sound funny. There is nothing else to like." ■ Hilary

DISLIKES: "Wishbone says the same things many, many times. It gets annoying!" ■ Rebecca

"I didn't like that Wishbone didn't co-operate and Wishbone's friend talked too much." ■ Eric

SOUND ADVICE: "Change the graphics, because they are sort of lousy." ■ Katie

FINAL REPORT: Beware of this dog.

ODYSSEUS WOULDN'T TAKE this tedious trip.



What the Adults Thought

Kids will never be easy subjects for adults to read, but their taste in software becomes more apparent every month. This month's CD-ROM winners and losers were easier to predict than the arrival of those post-holiday pounds. Parents preparing to drop some cash on kids' software should remember the following basic truths.

1. Kids love to make stuff, whether it's cards, stories, stickers, or animated movies. Our reviewers almost always give their highest ratings to any program that lets their imagination do more work than the computer. These days kids are writing their own scripts, selecting props, casting characters, looping audio, and debuting their own films—and loving it. (See: Hollywood High)

2. Kids like to have fun. Games that are more entertainment than edutainment seem to do well by default, although titles that actually teach kids new tricks and then let them play to perfection tend to take home the prizes. (See: Chess Mates)

3. Kids like to point and click. Titles loaded with gizmos that pop up, jump around, or fly across the screen on random clicking seem to satisfy something in kids' curious nature. (See: Let's Pretend! Many Lands, Many Playgrounds)

4. Interactive storybooks lose their appeal once kids have mastered their reading skills and can read the printed books on their own. (See exception: Green Eggs and Ham)

5. Educational products had better educate. Jazzed-up workbooks that offer glitzy practice problems without any explanation of how to actually do the work don't really do much at all. (See: Amazing Math)



After a hard day,
it's nice to sit back,
relax and smoke
a few Cubans.

Those #%*@! guerrillas are at it again. This time they've invaded Cuba, and it's up to you to blast 'em off the face of the earth. Meanwhile, they're attacking Guantanamo Bay with a savage swarm of tanks & MiGs. Luckily, the A-10 Warthog is armed with the most extreme airborne arsenal known to humankind.

The newest game in the A-10 trilogy, A-10 Cuba! for Macintosh is a fully-featured flight simulator with intense realism that's more awesome than last year's award-winning A-10 Attack! Developed by Eric 'Hellcats' Parker, A-10 Cuba! features network play, interactive instrumentation & real-time graphic action that looks, acts and feels like flying a real A-10 Warthog. As a stand-alone game, A-10 Attack! is not required for play. Download a demo today at www.parsoft.com. Then strap on your helmet and blow the suckers away until the only thing left is a smoldering Cuban butt.

A-10 Cuba! & A-10 Attack! are available at any halfway decent retail store or mail order outlet.

For instant gratification, call 800-372-9029 or 972-479-0825 to get an A-10 Cuba! & A-10 Attack! bundle for only \$54.95.

Plus S&H. Offer valid while supplies last. Shipped in promotional packaging.

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how to create a comic book

Grab a drawing program & bring along your imagination to create a comic.

Greetings, comics fans. Looking for action and adventure but too timid to try the newspaper personals? Want to crush evil-doers using your Mac in a way that doesn't involve actually throwing it at someone? Here's your chance. With your Mac, a drawing program, and a printer, you just might become the next Stan Lee.

Why create a comic book with your Mac instead of with pencil and paper? Well, it's easier to make corrections and to produce multiple copies, plus you can post your work on the World Wide Web.

If you're worried about your artistic abilities—or lack thereof—take heart. Read “Drawing Without Talent” (p93) for some tips.

Here's what you'll need to create your Mac-generated comic book:

- Pencil and several sheets of 8 1/2-x-11-inch paper
- Drawing program (a demo of Lari Software's LightningDraw GX is included on The Disc)
- Fertile, well-tuned imagination

Got that all together? Then let's leap into action!
—David Reynolds



POP IN THE DISC to find the tools you need for this tutorial.

STEP 1 Genesis

Beginning is the hardest part. To create a comic book, you need characters and a plot for those characters to follow. But before even these basics, you need to make a decision about what kind of comic you'll create. Will it be superheroes duking it out? Will it be political satire? Will it be a children's story? Will it be comix instead of comics? Once you've made this important first decision, much of what follows will fall into place, because you also will have determined a lot about

your audience, artistic style, and storytelling devices.

Now you can define your main characters. Take time to think about them. Get to know them by daydreaming or writing about them.

Next, outline the plot. Which characters will do what to whom, and where will the action take place? What will they say? How will they resolve conflicts? Don't be afraid of locking yourself into one plot. You can always rewrite it later if you change your mind.

1. The opening panel should be large to anchor the page. It's a great place to grab your reader's attention.

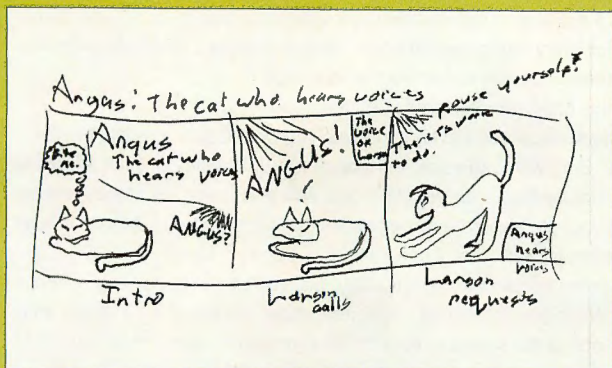
2. Typefaces convey character and help readers differentiate between voices.

3. Panels define the flow and pace of the comic.

4. Backgrounds help to set mood. Even simple color changes can do the job.

5. The narrator's voice is traditionally boxed, often with a yellow background.

STEP 2 Sketches and Storyboards



MAKE SOME ROUGH SKETCHES of your cartoon strip. Don't worry about details yet.

Now that you know who your characters are and what they'll be doing, draw some rough sketches of how they look. Unless you're unusually fond of computer drawing programs, you'll want to do this with pencil and paper. Don't worry about making perfect drawings; think of these as doodles. Your goal at this point is to get a general idea of your characters' appearance.

Next it's time to produce a storyboard. Using your plot outline and character sketches, rough out how the story will proceed in drawings depicting the action. These don't have to be complete sketches—all a storyboard does is show what action takes place when and how much emphasis is placed on each event. For example, a character walking down an empty street may be a necessary scene, but it doesn't require a large panel, because little is going on. On the other hand, a character getting socked in the eye deserves a larger panel, perhaps even a whole page. Storyboarding will help you see how events in your story flow from one to another, which events really need to be drawn, and how much play each event should get.

STEP 3 Determine a Look



TYPE STYLES AND COLORS can set the mood for your comic. Here are some examples.

You should now choose your comic book's artistic style. Style comprises numerous elements, including color scheme, fonts, and artwork. How you combine these pieces will determine what effect the comic will have on the readers.

The color scheme will have a strong subconscious effect. Bright, primary colors lend a cheerful tone that will appeal to kids, whereas muted earth tones will speak primarily to adults. Black-and-white can look very serious, or it can be a cost-saving method that has little to do with the book's tone. Think about the mood you'd like to create (somber, happy, scary, funny), then think about what colors best reflect that mood. Make use of hot (red, for example) and cold (blue) colors, light and dark shades of the same color, complementary and contrasting

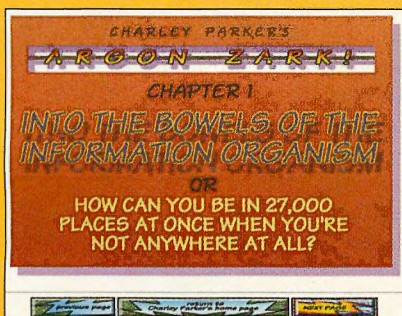
colors. Play around in the drawing program to see what you like; create your own colors and store them in a custom palette.

The style of drawings also affects the comic's tone. Artwork that's created with rounded, cartoonlike strokes or that's highly stylized tends to be lighter in mood than artwork with lots of angles and lines or that's highly detailed. Experiment with several different techniques.

Typefaces also influence how your readers perceive your comic. Because comic books typically have been hand-lettered, you might consider using one of several handwritinglike fonts for your narration, speech balloons, and thought balloons. Again, consider the feeling you wish to convey. For instance, if your tale is medieval, try a gothic font.

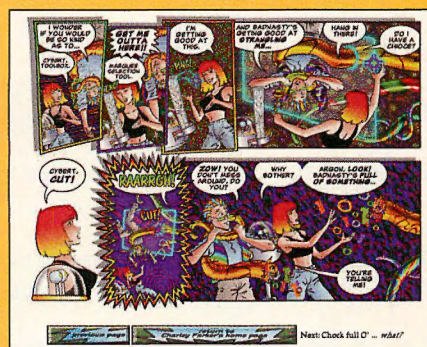
Creating comics for the Web

One of the advantages of creating a comic book with a drawing package is that you can save the comic in Web-friendly formats and



put it up on the Internet for all to see. An example of this is "Argon Zark," created by Charley Parker. Stop by <<http://www.netaxs.com/~cparker>> to see it.

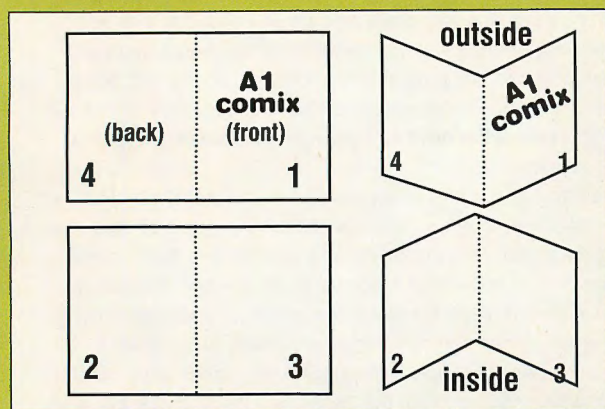
To ready your comic for online venues, skip the following steps that deal with page arrangement and page numbers. For Web publishing, one page in the drawing program equals one page on the Web. Your comic can be as many pages as you like, and its physical size can be whatever you want (do keep your file sizes reasonable, for downloading purposes). The rest of the directions about storyboarding and actual



page creation translate just fine.

Once you've drawn your comic, save each page in GIF or JPEG format and wrap it in a tidy HTML package. Upload it to your server, and you're ready to go.

STEP 4 Ready Your Layout



FOLD SOME PAPER as if it were an unbound book. Number the pages. This gets tricky because the pages of the mockup aren't sequential.

Decide how many pages the book will be. Because the layout method described here involves folding paper in half to create the physical sections of the book (called folios), the number of pages must be a multiple of four.

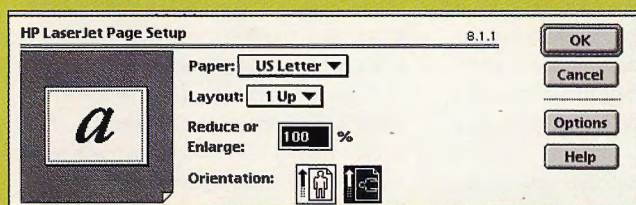
Make a mockup of your comic book with blank paper. Using one sheet of paper for every four pages of book, stack the papers, and hold them horizontally. Then fold them in half from side to side.

Hold this blank mockup as if you were reading it. Number each page and then begin sketching panels on the pages. Start with page one and sketch a rough draft, but don't include the cover yet. We'll deal with that later.

Using your storyboard and plot outline, you should be able to determine how many panels fit on a page and how big each panel should be. Sketch away until you've put everything on the mockup. When you're finished, disassemble the book and lay it down. You'll recreate each of the sheets in your drawing program. Remember, four comic book pages fit on a single sheet of paper—front and back—and each page in your drawing program holds two comic book pages (see diagram).

Hot Tip:
Start small.
Even a four-page comic book can be a lot of work.

STEP 5 Getting Set Up

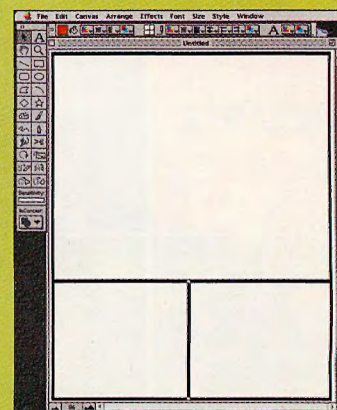


Open the drawing application. If it supports multiple pages, create a page in the application for each side of each sheet of paper in your mockup. If the application doesn't support multiple pages, you'll need to create a separate document for each side of each sheet of paper. (To save steps, set up a template and copy it for subsequent pages.)

Pages should be set up in landscape mode, not portrait mode—remember, you folded the paper in half. Give each page a 1/2-inch margin around the outside and a 1-inch margin down the middle. This should leave you with two boxes, each measuring 4 1/2 x 7 1/2 inches. Each box is the drawing area for a page in your comic book.

STEP 6 Time to Draw

If your drawing program supports layers, use them. Create a background, a foreground, and a panel layer for your comic, and arrange them in that order, from back to front. Now the first thing to put on each page is the panel grid. Referring to your mockup, draw the panel boxes on each page, placing them in the panel layer. Give them a thick, 6- to 12-point black or white line.



Making folios

Because folding paper properly is so confusing, here's how a 4-, 8-, 12-, and 16-page comic book should be divided up in a drawing program:

4 Pages Document page one: 4-1; document page two: 2-3

8 Pages Document page one: 8-1; document page two: 2-7; document page three: 6-3; document page four: 4-5

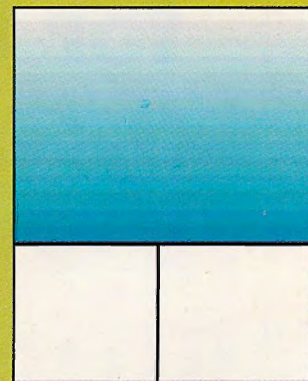
12 Pages Document page one: 12-1; document page two: 2-11; document page three: 10-3; document page four: 4-9; document page five: 8-5; document page six: 6-7

16 Pages Document page one: 16-1; document page two: 2-15; document page three: 14-3; document page four: 4-13; document page five: 12-5; document page six: 6-11; document page seven: 10-7; document page eight: 8-9

If your comic book will be more than 16 pages, make two equal-size books (each containing half the number of total pages), then staple the two books together to create the longer book. You'll end up with what, structurally, is two books on top of one another, but you'll use the cover to hold it all together.

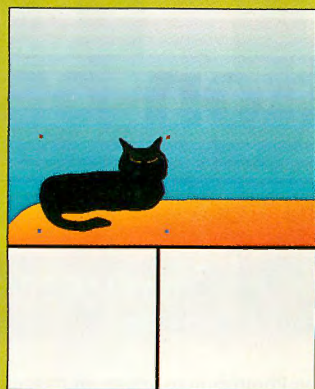
STEP 7 Background Info

Next, draw the art inside each panel. Layering is the key to this technique. Put objects on top of other objects, starting with the farthest. You can then move the objects around the panel without having to redraw everything. Switch to the background layer and draw the background, starting with the item that appears farthest away from the viewer—sky, mountains, buildings—and move forward until the background is complete. Keep the drawing inside the panel lines, unless you want to go for a daring effect such as action so big that it spills out of the panels. Panel lines also hide a multitude of sins by covering up ragged edges if your drawings aren't entirely even.



STEP 8 Putting It All Together

When you're done with the panel's background, switch to the foreground layer and start drawing the close-up elements, such as furniture and characters.

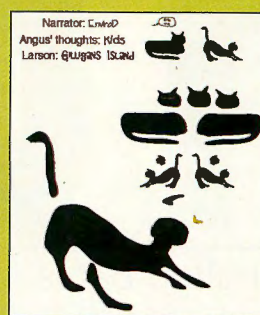


Angus before skewing.



Angus after skewing.

Use the tools of your drawing program to your advantage. Creative use of skewing, rotating, and resizing can give the illusion of an object having been moved, but you won't have to redraw it.

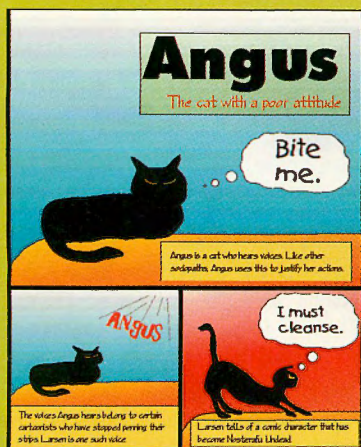


loons, and props) here so you can use them over and over. It's the Mr. Potato Head of comics.

Make a separate document and keep it open as a "parts bank." Store completed pieces of art (such as characters, thought balloons, and props) here so you can use them over and over.

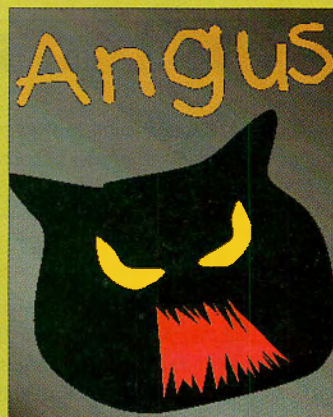
how to

STEP 9 Filling in the Blanks



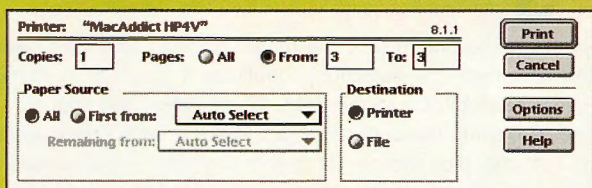
After you place those elements in the drawing, place the text, such as titles, thought balloons, and narration. When you're satisfied with the first panel, move to the next panel and repeat the sequence.

STEP 10 The Cover



When you've finished the body of the book, create the cover. This is a little easier, because you need only one document. Again using your template, do a Save As to create a document for the cover. Delete everything on the page except the margins. The right-hand box is your front cover; the left-hand box, your back cover. Draw your cover design in those boxes. Now you're ready to put the final book together.

STEP 11 The Finish



When you've finished all the drawing on your Mac, you're ready to put the final project together. Print the odd-numbered pages first, then reload those sheets into your printer and print the even-numbered pages on the other side. Arrange the pages in order, put the cover on the top of the stack, fold down the middle, and staple. And there you go—one finished comic book.

Drawing without talent

While the question "What is art?" can be debated ad nauseum by frustrated grad students in a dark coffeehouse, don't let ham-handedness stand in your way. You don't need to create art to create good drawings. Here's how to get started:

- Loosen up—It's not brain surgery, and you don't have to show your work to anyone if you don't want to. However, the book you produce will be so spectacular that you won't be able to resist.
- Don't knock the stick figure—The power of a few simple lines is underrated. Want to draw someone with glasses? Draw a big circle with two smaller circles side-by-side inside. Put a dot in each small circle. You're not trying to outdo Michelangelo, you're making a comic book.
- Clip art can be your helper—Drop in a few predrawn characters, and your comic is off to a rousing start. Spark's Comic Creator lets you pick from a stockpile of predrawn characters and settings.
- Send in that "How to Draw" matchbook cover—Practice drawing your favorite comic characters, then try drawing the characters in a drawing program. The more you practice, the better you'll get.

tips



how to make a button bar

This button bar is functional and darned good-looking, too.



FIND A TRIAL COPY of Photoshop on The Disc.

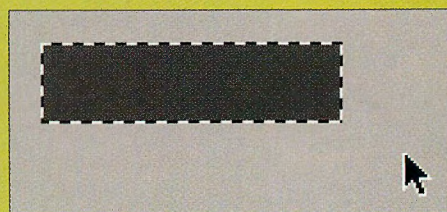
You can help visitors navigate your site with many tools, but one of the neatest is a simple button bar that you can place anywhere on your page. A button bar not only offers quick-click access to your major areas but also shows exactly what those major areas are.

This month we'll use Adobe Photoshop to create an image of a set of buttons. (If you can't afford Photoshop, substitute a similar application such as MicroFrontier's Color It! or Adobe PhotoDeluxe. Then we'll create the HTML code that will turn the image into a clickable "image map."

Part 1

Creating Buttons

We'll create a strip of five buttons, each large enough to hold a word or two. Adapt this to your own needs: Make smaller buttons or stack them two high.



BUTTONS START LIFE as simple gray rectangles.

STEP 1 Make a Basic Button

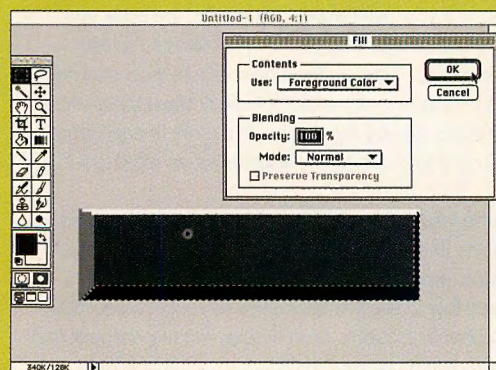
Open Photoshop and start with a canvas no more than 580 pixels wide and 200 pixels tall, and 72 dots per inch. Fill the whole canvas with the background color of your page, to help blend the shadows smoothly into your page background. If you use a background pattern, fill the window with the pattern's background color. Here's a tip for doing this easily: Take an 8-bit screen shot of your browser displaying your Web pages with background colors, and then save a one-inch square color swatch in Photoshop. Now you can sample the background color anytime you need it.

Next, use the marquee tool to create a short rectangle near the left edge of the window. You'll want a rectangle anywhere from 85 to 115 pixels long and 25 to 40 pixels high. (Use the Info palette to help set the size.) Fill it with a medium gray.

To keep your buttons from looking dithered on other monitors or platforms, try these grays from the 216-color palette: button center and shadow: RGB 51, 51, 51; hex 333333; lightest edge: RGB 255, 255, 255; hex FFFFFFFF; medium edge: RGB 102, 102, 102; hex 666666; darkest edge: RGB 0, 0, 0; hex 000000; Netscape Gray background: RGB 204, 204, 204; hex CCCCCC. Save the graphic in indexed color and "exact" palette.

STEP 2 Jazz Up the Button

Now give the button cool three-dimensional edges. Use the lasso tool to create beveled edges, filling the top and right edges with lighter grays and the bottom and left with darker. When you get it just right, archive a copy for safekeeping in case you mess up.

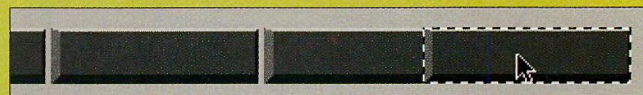


HERE'S A TIP for making this step easier: Hold down the Option key when using the lasso tool to simply click at every joint.

STEP 3 Make More Buttons

Select the whole button (use the magic wand to select the background and invert the selection), duplicate it (copy, then paste), and slide the duplicate to the right. When sliding the buttons (or later when placing the buttons on the shadow and placing words on the buttons), hide the marching ants (command-H) and use the arrow keys to move objects one pixel at a time. Also, hold the Shift key while sliding the buttons to keep them on a horizontal line. Make a total of five evenly spaced buttons.

When you're happy with a set of buttons, archive a copy for safekeeping, then select all the buttons (again, use the magic wand to select the background and invert the selection), and copy. The buttons will wait in the Clipboard until we need them, in a minute.



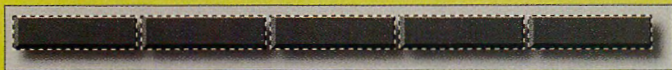
YOU CAN USE THE ARROW KEYS to move the rectangles one pixel at a time when aligning them.

STEP 4

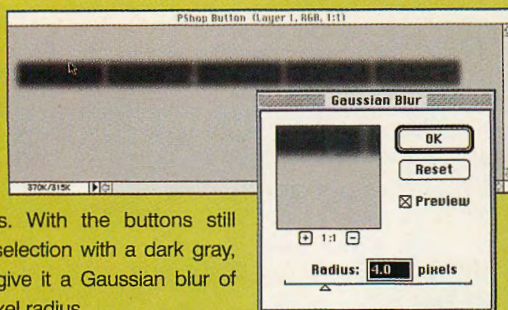
Shadow Play

Now we'll create the shadow behind the buttons. With the buttons still selected, fill the selection with a dark gray, deselect it, and give it a Gaussian blur of about a 4- to 6-pixel radius.

Now paste your copied buttons back into the window and drag them to the upper left of the shadow so that the buttons overlap the shadow effect.



When you like what you see, deselect (command-D), and crop the picture down to the minimum. Be sure you don't crop some of the shadow as it fades into your background color. Save a copy of this blank button bar as a template so that you can change the titles of the buttons at will.

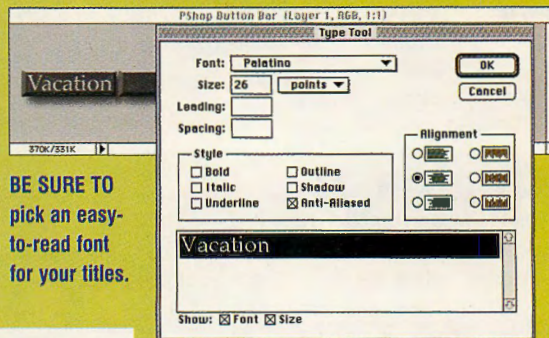


STEP 5 Add Words

Now we'll add titles. It'll take a bit of experimentation to find exactly the right size text to fit inside each button.

Use the type tool and be sure anti-aliasing is turned on. Pick white or a very light gray as your foreground color. Experiment with your longest title to find the best size to fill the button. And please use a simple, readable font such as Palatino or Helvetica.

When you're finished, convert the image to indexed color and exact palette, and then save it as a GIF image. Now it's ready to place on your Web page.



BE SURE TO
pick an easy-to-read font for your titles.

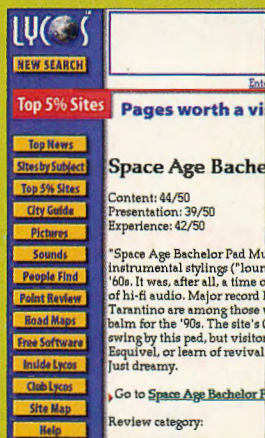
Part 2

Linking the Buttons

Now we're ready to turn this mere graphic into a working, clickable navigation tool. We'll use what's called an image map. Imagine pointing your finger at any city on your road atlas and being instantly transported there. That's the essence of an image map, a set of invisible shapes you draw on top of a Web-page graphic, each of which is hyperlinked so that parts of the image become clickable links.

The button bar down the left side at Lycos's site is a single image. An image map rectangle invisibly drawn over each button links it to the destination.

Image maps come in two styles. A "server-side" image map requires special files on your Web server that intercept and interpret a visitor's clicks. Some local Internet service providers will let you



create such files but not usually for inexpensive home page accounts. You can't use a server-side image map on an America Online home page, for example.

A "client-side" image map acts just like a server-side image map with one important difference. The code to intercept and interpret clicks is simple HTML on your page—you can have client-side image maps even on your America Online home page. Why would anyone use the more complicated server-side image map? Simple: Client-side image maps don't work with early browsers such as Mosaic and Netscape 1.x. Lynx 2.6, the venerable text-only Unix browser, however, can read client-side image maps.

If you want to create server-side image maps, check out a book such as "HTML, the Definitive Guide," by Chuck Musciano and Bill Kennedy (O'Reilly & Associates). If you want to create client-side image maps, read on! There are three ways to do it. Here are the details.

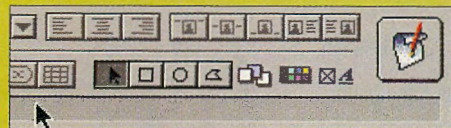
WARNING: Please don't create a huge, full-color map on your main page to direct visitors all over your site. No one wants to sit and wait several minutes for an image download just for the privilege of clicking again.

Choice 1: The Easy Way—Adobe PageMill 2.0

Adobe PageMill 2.0 makes creating an image map a cinch. (We don't much care for golive Pro 1.0, which lacks such essential features as tables. By the time you read this, however, Claris's HomePage 2.0 with support for client-side image maps should be available.)

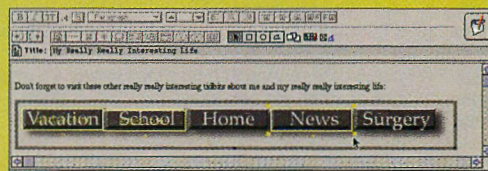
First, place the button bar image on your Web page by dragging it right from Photoshop directly into place in PageMill. (Isn't drag and drop wonderful?)

Double-click the image to activate the image map tools in the toolbar and use the rectangle tool to outline the first of the buttons.



THE IMAGE MAP
tools appear only
after you double-
click an image.

To link the button to the destination, type or paste the URL into the text box at the bottom of the window and hit Return. Or drag the destination's page or anchor icon onto the shape to link it.



DISPLAY THE
URL associ-
ated with each
shape in
your choice
of color.

When you've finished mapping all the buttons, turn off PageMill's editing mode and test the link. When you're happy with it, upload the page to your Web server. Then tell your friends.

Choice 2: HTML!

Hot Tip:

Add the `Border="0"` attribute so that the image will blend seamlessly into the page, and an ALT name so that text-only browsers know what they're missing.

Typing out an image map's HTML in a word processor isn't difficult. The tricky part is determining the coordinates of the shapes.

Inside the graphic's image tag, add two attributes: "ISMAP" tells the browser that the image is a map, and "USEMAP="#name"" tells the browser where to look for the map's details. Here's an example:

```
<IMG SRC="gifs/yagel.gif" ISMAP ALT="Button Bar" BORDER="0" USEMAP="#image2">
```

The "MAP" group of tags describes the shape, coordinates, and hyperlink for each shape. ("MAP NAME=" determines the name you point to with USEMAP in the IMG tag). Here's the look:

```
<MAP NAME="image2">
<AREA SHAPE=rectangle COORDS="229,3,339,33"
```

```
  HREF="home.html">
```

```
  <AREA SHAPE=rectangle COORDS="342,3,452,33"
```

```
  HREF="news.html">
```

```
  <AREA SHAPE=rectangle COORDS="455,3,565,33"
```

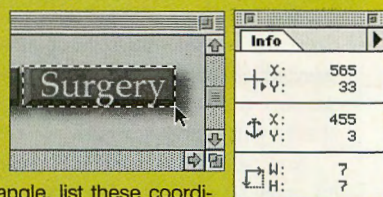
```
  HREF="surgery.html">
```

```
</MAP>
```

Now determine the coordinates. You can use Photo-

shop's Info palette. At right, we're measuring the lower

right corner. To create a rectangle, list these coordinates: upper left x, upper left y, lower right x, lower right y. For a circle: center x, center y, radius. For a polygon: Define each vertex by the x and y coordinates. In each case, 0,0 is the upper left corner of the graphic.



Choice 3: WebMap

The freeware WebMap 1.0.1 (the beta of 2.0 works fine, too) creates server-side image maps, but use it to mark up your image and then export the text to use in your client-side maps. WebMap

is harder to use than PageMill but easier than HTML.

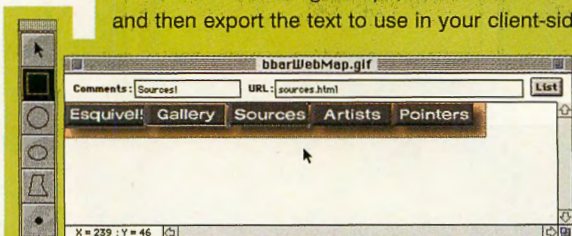
Use WebMap's rectangle tool on all

the buttons, then export the text.

The heart of the exported text will look like this, easily inserted into your client-side image map HTML:

```
rect (229,3) (339,33) home.html
rect (342,3) (452,33) news.html
rect (455,3) (565,33) surgery.html
```

Your button bar is ready to test and present to the world. You can modify these buttons and put them on all your main pages. Now that you've run through the process once, it'll be a snap to apply the same principles to any image. —Joseph O. Holmes



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YOU'RE A

Mac Addict

10. Your 486 works great—as a flower press

9. You constantly double-click the bar of soap in the shower

8. You talk in a wild, animated manner about new “extensions” and “peripherals”

7. You can't resist the urge to use “Command Y” to eject your Pop-Tarts from the toaster

6. You wish this was a “Top Five” list so you could get back to your Mac sooner

3. You paid \$150 for an old Homestead High School yearbook picturing Stephen Wozniak

5. You read “Inside Macintosh” to your three-year old Mac whiz instead of Dr. Seuss

4. You turn on the TV and are concerned when you don't see a smiling icon

2. You are always telling people you can quit using your Mac anytime you want to...



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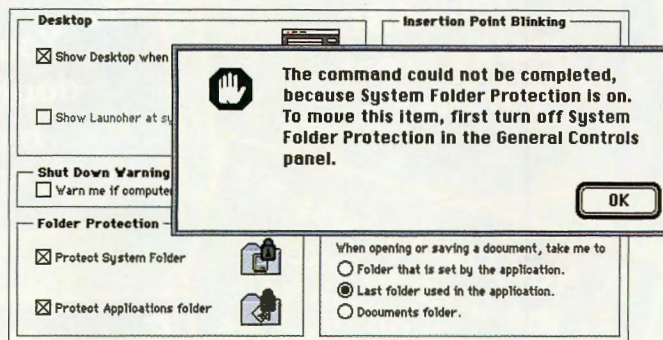
FIND THE
SHAREWARE
mentioned
on The Disc.

Q Two folders on my Performa 636 are locked, and I can't throw away anything from them. My System Folder has a ton of crap in it, but the files are all locked. Holding down the Option key while trying to empty the Trash gives me a message saying I can't delete the item because it's locked. The same thing happens with the Applications folder. Can you help me, please?

A Open the General Controls control panel and take a look at the settings for Folder Protection in the bottom left corner. If these checkboxes are selected, you're prevented from trashing items in the System and Applications folders. Deselect these checkboxes and everything should be normal again.

Q I have a Power Mac 7500/100 that I want to upgrade with Apple's 132MHz daughterboard. However, I've never attempted this type of modification. Should I hire a technician? Also, my 7500 has a 256K level 2 cache module. Can I retain this module or must I remove it, inasmuch as the CPU on the new daughterboard has a 32K cache built in?

A If you installed the L2 cache module in your Mac, installing a 132MHz Mac Processor Upgrade Card shouldn't present a problem. Flip to "Appendix B: Installing an Expansion Card" in the "User's Guide" that came with your machine. This tells you everything you need to know. Essentially the same rules apply when adding any internal component, from memory to Peripheral



THE FOLDER PROTECTION options in the General Controls control panel prevent files from being moved or trashed.

Component Interconnect (PCI) cards: Shut down the Mac, unplug everything except the power cord, pop open the lid, then discharge any static electricity by touching the power supply (that's why you leave the power cord plugged in: to ground the Mac). If a static wrist strap is supplied with the component, use it; otherwise, I don't think they're necessary if you're careful to touch components by the edges, as if they were priceless photographs. Remove the 100MHz daughterboard, put it in an antistatic bag, then insert the 132MHz daughterboard in its place. Never force anything. If it doesn't fit, wiggle it gently, but never push or pull too hard. You may break something very expensive.

Just like the PowerPC 604 on the 132MHz daughterboard, the PowerPC 601 currently in your 7500 contains a 32K level 1 cache, which works with, but does not eliminate the need for, your 256K L2 cache. So keep the module. Even though the new CPU is faster, it's even faster with an L2 cache.

Q When I turn on my Centris 660AV, I hear the start-up chime, but nothing else happens. No video, no sad Mac error codes... nothing. I've tried zapping PRAM, using a different monitor, and starting from a floppy, all without success. Help!

A Replacing your Mac's battery should do the trick. Every Mac has a battery inside to supply power to the parameter RAM (PRAM) so that important information (such as the date, time, Chooser selection, startup volume, and so on) is retained when the computer is shut down. The most common symptom of a dead battery is that the Mac forgets these settings between sessions, but some users have reported trouble starting their Macs with the keyboard's Power key. Most late-model Macs have their batteries in snap-in receptacles, so usually you needn't hire a service

Upgrading Secrets

In the October 1996 issue of MacAddict, I stated that "anyone using the DRAM-based video on a Power Mac 6100, 7100, or 8100 should get a 1MB L2 cache regardless of the amount of RAM, since performance is greatly increased when the entire video image resides in cache." While it's true that a 1MB L2 cache does speed up overall performance under these conditions, I'd like to amend my recommendation. If the cost of a 1MB L2 cache for one of these Macs is more than half the cost of an accelerated video card (about the only kind you can buy nowadays), get the card instead. You'll see a noticeable improvement in graphics tasks, and you can buy a much less expensive 256K or 512K L2 cache to address overall system performance. By the way, anyone considering buying memory should first check Eric Belsley's RAMWatch on The Macintosh Resource Page (<http://www.macresource.pair.com>). Every week Eric posts the high, low, and average prices for common memory modules from a variety of vendors. A great Web resource indeed.

technician to replace the battery. Desktop Macs (including your Centris) typically use a 1/2 AA, 3.6-volt, snap-in lithium battery. Some models (such as the LC series) use a 4.5-volt battery with a two-wire harness and four-pin Berg connector. The earliest Macs use a full-size AA, 3.6-volt battery. After replacing the battery, your Mac should start right up, but you'll need to manually reset various parameters. Two good sources for batteries are Resource 800 (800-430-7030 or 212-596-5078; <http://www.dallas.net/~r800>) and your local Radio Shack.

Q Whenever I run Norton Utilities Disk Doctor, I get the following message: "Your system clock appears to be set incorrectly. If the current date and time is not [today's date] then you should set the correct date and time with the Control Panel." Invariably, the correct date and time appear in the message. I replaced the lithium battery that powers the clock. I still get the message. Any ideas?

A Symantec technical support confirms that this is a problem if you are using Norton Utilities 2.0. That version assumes any date beyond December 31, 1994, is incorrect. The current version of Norton Utilities, 3.2.1, fixes this problem and adds a lot of new features. You can upgrade from 2.0 for \$39.95.

Q I'm looking for a utility that lists all of the programs, desk accessories, extensions, etc. on my hard disk so that when I see a program online or on the MacAddict CD-ROM, I can quickly check to see if I have the latest version of the file. What do you recommend?

A Check out Bill Patterson's freeware program FileList+, a utility that quickly and easily creates lists of files that can be searched, sorted, and printed. If you want version numbers to be displayed in your lists, before initiating a scan choose Scan Options from the Volumes menu, then select the Get Version Information checkbox.

Another option is Help! from Teknosys (813-620-3494). Help! is a commercial utility that scans a volume, such as a hard drive, and then consults its huge knowledge base to produce a report of known conflicts (and suggested solutions), system specifications,

Fun Factoid

New Money

In 1989 Joseph Graziano earned the nickname "The Million-Dollar Man" after Apple paid him a \$1.5 million signing bonus to leave Sun Microsystems, where he had been chief financial officer for two years. He had been Apple's CFO from 1981 to 1985, at which time he quit to spend time with his brother Anthony, who was dying of cancer. When word of the signing bonus spread around Apple, employees began computing budgets and profits in a new unit of currency called the Graz. For example, if your budget got cut by \$6 million, you'd say they slashed "four Grazs." Graziano eventually resigned in October 1995 after losing a boardroom showdown with then CEO Michael Spindler over whether Apple should consider merging with one of several large computer companies.

duplicate files, and much more. Most important for your intended use, it lists programs' version numbers side-by-side with the current versions (current, that is, at the time of Help!'s most recent quarterly release).

Q Recently my Mac IIcx began refusing to turn on regardless of whether I press the Power button on the keyboard or the one on the back of the Mac. The only thing that seems to work is to unplug the power cord for 10 minutes or so, then plug it back in, and press either power button.

A This problem is fairly common with the type of power supply used in the Mac IIcx and IICI. According to some reports, the problem is bad solder connections on the top printed-circuit board inside the power supply. If you're handy with a screwdriver and soldering iron, you might want to carefully open the power supply and resolder all of the connections—no simple task. I did it to my IICI, which was exhibiting the same behavior, and it appears to have solved the problem. Less adventurous readers will be more inclined to replace the entire power supply, which doesn't require the services of a technician—the unit pops out easily if

you unhook the plastic finger holding it to the internal drive bracket. Shreve Systems (800-227-3971 or 318-424-7987; <http://www.shrevesystems.com>) sells new replacement power supplies for \$179, and Mac Sale International (800-729-7031 or 602-858-0900; <http://www.getnet.com/macsale>) offers refurbished power supplies for \$119. Considering that you can buy a stripped-down, used Mac IICI from Mac Sale for less than \$250, I'd hesitate to replace a faulty power supply. Instead, I'd learn to live with the problem, simply remembering to unplug the power cord after each shutdown.

File: "Untitled" 309 Files •

File: "Untitled" (NOT saved) Files: 309 Mem Used: 18K/74K (no match data) time 0:10
Selected: 0 Total Bytes: 0K Groups: 0

FIND Name: ☐ Equals ☐ Includes
☒ Begins ☐ Ends

Find Next Find First Find Prev Find All Type: Creator:

FILE NAME	VERSION	TYPE	CREA	BYTES	CREATED	MODIFIED
Find File	1.1.2	APPL	fnf	259509	12/19/95	12:00:00 12/20/95
Graphing Calculator	1.0	APPL	RonA	509174	01/08/94	12:00:00 01/08/94
Jigsaw Puzzle	1.0.1	APPL	jigz	104306	11/17/94	12:00:00 11/17/94
Key Caps	7.5	dfil	keyc	11620	05/09/94	12:00:00 05/09/94
Note Pad	7.5	APPL	npdt	69291	08/02/94	00:00:00 08/02/94
Energy Saver		adrp	winkl	554	07/18/96	12:25:05 07/18/96
Icon...				2670	07/18/96	12:25:05 07/18/96
Scrapbook	7.5	APPL	sbkt	55250	08/02/94	00:00:00 08/02/94
SimpleSound	1.0	APPL	sSnd	82042	06/22/95	12:00:00 06/22/95
Stickers	1.0.1	APPL	notz	88538	10/24/94	12:00:00 10/24/94
• Shut Down	1.1	dfil	shdo	4390	11/15/94	12:00:00 11/15/94
Apple Menu Options	1.1.2	cdev	CDJR	54385	02/23/96	12:00:00 02/23/96
AppleTalk	1.1	cdev	atdv	211571	01/19/96	12:00:00 01/19/96
AutoRemounter	1.2	cdev	Remt	21910	08/25/93	17:00:00 08/25/93
Color	7.1	cdev	colr	11403	08/13/92	12:00:00 08/13/92
ColorSync™ System Profile	2.0	cdev	synC	28559	03/23/95	12:00:00 03/23/95
Control Strip	1.3.1	cdev	sdev	42604	11/09/95	12:00:00 11/09/95
Date & Time	7.5	cdev	time	68403	08/02/94	00:00:00 08/02/94
Desktop Patterns	7.5.1	APPL	dskp	280631	01/19/96	12:00:00 01/19/96

FILELIST+ IS A FREE PROGRAM that displays version number information for the files on your disks.



Sorry, a system error occurred.
"Netscape"
error type 11

Restart

OH NO, NOT AGAIN! We all get Type 11 errors from time to time, but if you seem to be getting an inordinate amount, then try these steps to eliminate, or at least greatly reduce, them.

Q What's causing all these damnable Type 11 errors on my Power Mac?

A If I knew the answer and could provide a solution that would forever banish such rude interruptions to our computing bliss, I'd be a very rich freelancer (come to think of it, I'd retire). Here's the gist of what Apple has to say on the subject as published in a recent issue of its Information Alley electronic newsletter:

While listed as a "hardware exception error," getting a Type 11 error doesn't necessarily mean there's anything wrong with your hardware. In fact, none of the type "XX" errors identifies a particular software or hardware component error.

Type 11 errors are common on Power Macs because the software-based 68000 emulator gets corrupted while loading into RAM, either by incompatible software or faulty hardware. When troubleshooting Type 11 errors, always eliminate potential software problems first, then check the hardware. Here's the course of action Apple recommends:

Step 1: Upgrade your hard disk drivers and system software to the latest versions.

Step 2: Contact software vendors for compatibility information if problems occur in particular programs and you can reproduce them consistently.

Step 3: Turn off all extensions and control panels if the error occurs in a program that is supposedly fully compatible with a Power Mac. Check the program again. If the problem goes away, then troubleshoot your extensions, control panels, and fonts. Large numbers of fonts can cause similar errors; troubleshoot by moving them from the Fonts folder to another folder. If you still have problems, follow step 4.

Step 4: Perform a clean installation of the system software (see the premiere issue of MacAddict for details, Sept/96, p87), then test the system performance for a few days. If the problems continue,

particularly in the Finder, your hardware may be to blame.

Step 5: Disconnect any external or internal SCSI devices that have been added (or exchanged for the original Apple hardware) and continue testing. Since SCSI device drivers load into memory when the Mac is turned on, they can generate conflicts similar to extension conflicts. If you are using a non-Apple formatting utility, contact the vendor of the utility for compatibility information. Removing internal SCSI devices is best performed by an Apple-authorized service provider if you are unsure of your technical skills.

Step 6: Remove any extra third-party RAM and test. Also verify that you are not using composite RAM (such modules look like they have chips stacked on top of each other rather than mounted individually to the board).

Step 7: Remove level 2 cache RAM, if present, and test. If you continue to get a lot of Type 11 errors using a clean version of the system software without any third-party hardware attached (including internal or external SCSI devices, additional RAM, or L2 cache RAM), have your computer serviced by an Apple-authorized service provider. Call 800-767-2775 to schedule a repair.



NOW MENUS allows you to assign keyboard shortcuts to almost any menu item. Here it's causing trouble because the shortcut was assigned accidentally.

the Mac switches back to America Online. This problem appeared around the time I installed Now Utilities, but I haven't found any relevant information in the documentation, nor in the Finder's Help menu. Any suggestions?

A Now Utilities is the likely culprit. One very handy feature of the Now Menus component of this package is the ability to assign keyboard shortcuts to almost any menu item just by pulling down a menu to the item and pressing the desired keystroke. I use it all the time to add shortcuts to menu items that don't normally have them. For example, I assigned the keystroke Command-R to Restart in the Finder's Special menu. It sounds like you inadvertently assigned a shortcut. To remove it, highlight America Online in the Finder's Application menu and press Delete. The keystroke designation to the right of the program's name should disappear. Then consult the user guide again for information on how to take advantage of this useful feature.

Owen W. Linzmayer (AskAddict@aol.com) is a San Francisco-based freelance writer and the author of "The Mac Bathroom Reader." Please submit technical questions or helpful tips directly via e-mail or c/o MacAddict, 150 North Hill Drive, Brisbane, CA 94005.

Q Help me solve a puzzle that has reared its ugly head on my Performa 6200 running System 7.5.3. Somehow America Online was automatically and arbitrarily assigned a keystroke (Command-Q) that appears in the Finder's Applications menu. Now whenever America Online is open and I try quitting any other program using that keystroke, it doesn't work and

Shhhhh...

In the "Ask Us" section of your November issue, your response to the question, "Is there any way to turn off the chord that plays when I turn on or restart my Mac?" was that there is no easy way to turn off the startoff chord. Wrong! The freeware extension QuietStart (which was not mentioned in the response) handles this task very nicely on my Duo 230, and on Macs with the appropriate ROM. This extension was even included on the November disk—does the right hand know what the left hand is up to there at MacAddict? —A MacAddict Fan

Apparently our hands are not talking to each other (to mangle a metaphor). I had originally included a mention of QuietStart, but my editor removed the mention because I couldn't pinpoint on which Macs it worked. I tried contacting the programmer for a list of compatible Macs and he seems to have disappeared off the Net. Alas, the mention of it was yanked, but as you've discovered, the file on The Disc wasn't yanked. Oh well. —OWL

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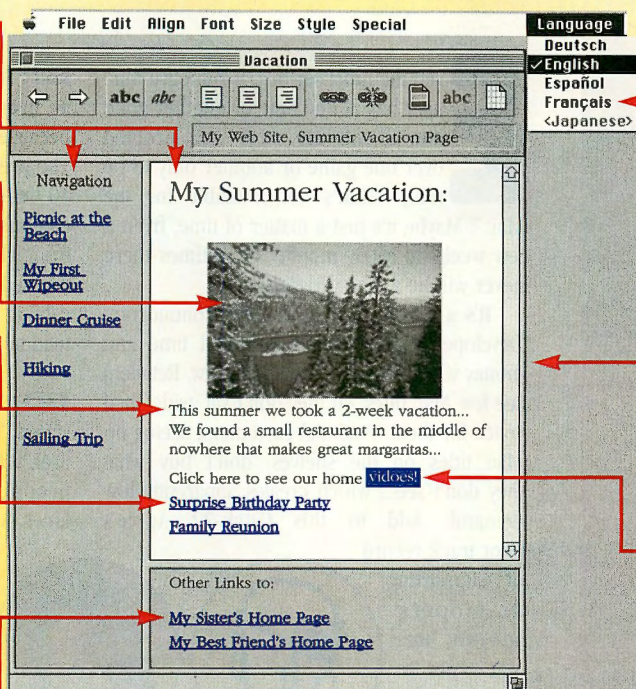
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powerplay

The state of Mac gaming, and why holidays are particularly important.

Teasers

Damage Incorporated

PUBLISHER: MacSoft
CONTACT: 800-229-2714

Damage Incorporated is another MacSoft game that uses the Marathon engine licensed from Bungie. This game is *not*

a mystery as Prime Target is. This one is in a modern military setting—you get to run around in fatigues killing as many people as you can.

FullTilt Pinball 2

PUBLISHER: Maxis
CONTACT: 800-526-2947;
<http://www.maxis.com>

Biff! Bang! Pow! Flip out over Maxis' latest version of Full Tilt Pinball. The new version includes

three new full-screen tables including this superhero. Zowie! Just don't let your Mac fall to the ground when you try to tilt the table.

Sacred Ground

PUBLISHER: Activision
CONTACT: 310-473-9200;
<http://www.activision.com>

Sacred Ground is the second in Activision's Sante Fe Mysteries series. Although not a

huge challenge to the experienced gamer, this series relies on high-quality video sequences and an intuitive interface to keep you entertained. Activision is one of the few companies that has figured out how to integrate full-motion video into adventure games. Your job in this mystery is to discover a kidnapper by interviewing suspects before everyone gets killed. Stressful.

Even the most serious, productive Mac user has at one time or another gone into a software store and drooled over one game or another only to be told, "That's not available for the Mac." Maybe it's just a matter of time, from a few weeks to a few months. Sometimes there never will be a Mac version.

It's a classic chicken-and-egg conundrum: Developers are reluctant to spend time and money when Mac demand seems low. Retailers see few Mac titles, so they don't set aside shelf space for them. Potential customers, seeing no Mac titles on the shelves, don't buy what they don't see... which creates apparently low demand. Add to this Catch-22 Apple's poor track record of supporting developers and it's "the Mac's not a toy" attitude, and it's not surprising that past years have seen slim pickin's

while the PC game market has exploded. Apple has made reassuring motions—such as releasing Game Sprockets, a freely licensable library of features for game development—but will the late and meager efforts be enough?

We asked three people at the heart of the Mac game nexus. Eric Johnson is the vice president for marketing at Activision, which recently brought out Mac versions of its popular MechWarrior 2, Zork Nemesis, and Spycraft games. Bill Dugan, aka Weez, is the chief Mac guru at MacPlay, a division of Interplay. Eddie Davis is the first in-house Mac programmer at Interactive Magic, a company moving toward making more Mac games.

MA: What led to the current Mac game situation, from a developer's point of view? Was the problem one of supply or demand?

EJ: It was a combination. [Activision wasn't as interested in making games for the Mac because] the installed base wasn't that large. The premier game platform was the PC: It had 10 times the installed base—about 30 million, compared with 2.6 million Mac households, from what I understand. Second, retailers were focused on PCs, and a lot of Mac people were catalog purchasers. Catalog prices of games tend to be lower, and our margin is lower.

BD: I think the ebb in the market is overstated. There really wasn't [any]. Mac gamers aren't that different from PC gamers. Mac people, however, are picky about their interfaces. A clunky Windows or DOS interface just

won't be appealing to the Mac market. Companies that did cheap ports, and then saw poor sales, blamed it on a lack of interest.



Eric Johnson
(not actual photo)



Bill Dugan



Eddie Davis

ED: Apple was very sensitive to [criticism that the Mac was a toy computer]. They wanted to push the business end, but because of that the stores had only a tiny section for Mac games. Apple stifled the whole market.

MA: What was Apple doing, or not doing?

EJ: Apple wasn't aggressive with game companies, while others were. Microsoft had a whole group of people supporting us during the development of Windows 95. They brought our programmers up there for weeks to make

sure we could take advantage of all the features of their operating system. They also provided financial support for some breakthrough titles. There never was anything similar from Apple.

"IT'LL

GET BETTER FROM
HERE, AS LONG AS PEOPLE
KEEP BUYING MAC GAMES."



Activision had no plans to make a Mac version of MechWarrior—demand convinced them otherwise.

IMagic's first Mac game, Apache, was ported by an outside firm, but IM is optimistic about simultaneous development.



Apple's Net Sprockets sped development of MacPlay's Conquest of the New World by nearly a month.



games

BD: Apple helped, but not much. They included us on the developer lists so we got beta versions of the system software and had access to developer discounts on hardware. [Microsoft] realized early on that games are really important to the public's perception of the platform. Apple started realizing that in the last few years.

ED: One of the problems is they released very little technical information on how to make good graphics or 3D techniques. You almost felt confined by the OS. Apple wasn't helping us break out of these confines.

MA: What is the situation now? How has it changed?

EJ: We had some games for the PC that were so successful that we were getting a lot of requests to bring them to the Mac. We felt that a top 10 title on a PC could probably sell well on a Mac. And we were starting to get a large enough installed base of PowerPCs that could actually play our high-end games, so it was worth taking a shot. Also, Apple is starting to get more aggressive in marketing. They seem to be putting more manpower behind it.

BD: We used to develop for the Apple II, the Commodore, the PC, all of those. It took a lot of effort to create an SKU for each computer. Now the different platforms we consider are the PC, the Mac, and the consoles. [Compared with making a console version], a Mac version of a PC game is easy. The only cost for the developer is one good programmer. It's nuts to do a really good Windows game and not do a Mac game simultaneously—it's the cheapest port you'll ever do.

[In the last year] it's been a 500 percent improvement from Apple. We get a lot more attention from the marketing side and from the sales side, but I think the most significant impact is on the technology side, because we have access to all the engineers who are working on all this wonderful stuff. With Sprockets more people will be able to make more games more easily, especially ports. The Net Sprocket itself could cut three months off development time and make it

that much harder to argue against producing a Mac version.

ED: I'm not sure what in Apple's mind-set changed, except they realized that games is one of the biggest segments of the software industry and that they were pretty much missing out on it. Now they have mailing lists, bulletin boards, and an Evangelist specifically for game developers. They encourage us to talk among ourselves and make suggestions to Apple. Apple is definitely pushing the industry to move games to the Mac.

MA: How's progress on the retail side?

EJ: Apple still has a way to go. The biggest thing they could do is heavily help expand retail distribution, because if people can't go into stores and buy the product... [laughs]. Apple doesn't have unlimited money, but enough money and clout to negotiate dedicated space in stores. There's enough product.

BD: The easy response for me to make [to Apple] is: Spend millions of dollars, buy up all the shelf space you can, run TV ads, fund game development, etc.

I don't think the Mac is going to win the shelf wars. I think the Mac is always going to be number two. But I love being number two, because we love the Mac. We love making these games, and we love being the big fish in the smaller pond. We're making a profit, and that's fine.

It'll get better from here, as long as people keep buying Mac games. If Mac sales plummet [during the holidays], it could be a scary time. If sales are good, we could see a lot of games kicked off and we'll be fine for a few years, no matter what happens.

ED: We want to know as developers that if we produce for the Mac it will sell. If Mac users can depend on their favorite games coming out quickly, it will encourage people to buy Mac. It is a small percentage of the market, but I see it as a growing percentage. —D. D. Turner

more Teasers

Warcraft Battlechest

PUBLISHER: Blizzard

Entertainment

CONTACT: 800-953-7669;

<http://www.blizzard.com>

Sharpen your blades and ready the battleships.

Warcraft Battlechest includes Warcraft, Warcraft II, and the Warcraft II expansion set. Beyond the Dark Portal adds new missions, expands the NPCs, and adds more custom scenarios for both single and multiplayer games.

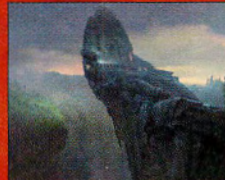


Obsidian

PUBLISHER: SegaSoft

CONTACT: <http://www.sega-soft.com>

Apparently it took a rocket scientist to figure out that SegaSoft could market Rocket Science's games more effectively. So, you can now bother SegaSoft about Rocket Science's games such as Obsidian. This spiffy game was made using the MTropolis authoring system and has a fantastically surreal Kafka-meets-Escher feel.



The Sacred Mirror of Kofun

PUBLISHER: Enteractive

CONTACT: 800-433-4464;

<http://www.enteractive.com>

This sacred title takes place on the sea, not on ground. The Sacred Mirror of Kofun is a graphic adventure—but its not your ordinary point and click. Ostensibly on a mission from Jean-Michel Cousteau to explore reefs for biodiversity, you get caught up in the mystery of the missing mirror when one of your team members disappears. Kofun uses QuickTime VR to provide an alternate navigation method. The game also features a snotty French computer. —Kathy Tafel



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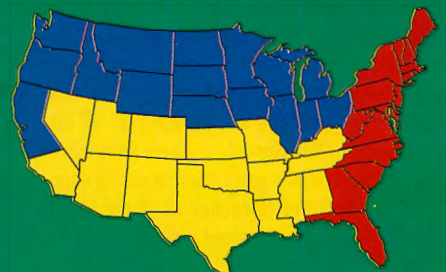
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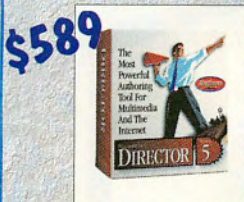


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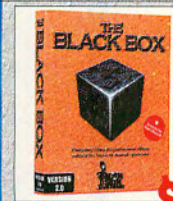
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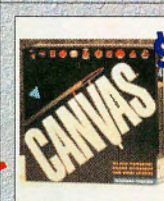
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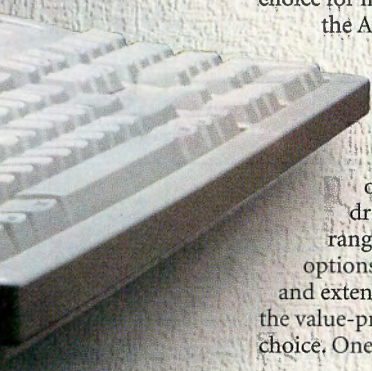
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INTERFACES

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604e200

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- 5-3.5" Low Profile Internal Bays
- 5-PCI Expansion Slots
- INTERFACES**
- Printer Port
- Modem Port
- ADB Port
- SCSI Port
- Supports 14", 15", 17" & 21" Monitors
- SVGA Monitor Port
- 16-bit Sound Output Port
- Rear Headphone Jack
- Microphone Jack
- INCLUDES:**
- 8X CD-ROM
- 24MB RAM
- 2.5GB HD
- Floppy Drive
- 2MB VRAM
- 512K L2 Cache
- ADB Keyboard & Mouse
- One-Year Limited Warranty
- Mini-Tower Case

COMPARISON

	5.25" Intl. Bays	3.5" Intl. Bays	PCI Expansion Slots	Printer Port	Modem Port	ADB Port	ADB Keyboard	ADB Mouse	PS/2 Port	SVGA Monitor Port	Supports 14", 15", 17"	SCSI Bus	IDE Bus	16-bit Sound Output	Rear Headphone Jack	Microphone Jack	8X CD ROM	Hard Drive (GB)	RAM	L2 Cache	VRAM (MB)	Floppy Drive	Price
APS 604e200 Tower System	3	5	5	✓	✓	✓	✓	✓	✓	✓	1	✓	✓	✓	✓	✓	2.5	24	512K	2	✓	\$2599	
POWERTOWER 200e Tower System	3	2	3	✓	✓	✓	✓	-	✓	✓	1	-	✓	✓	✓	✓	2	16	1MB	2	✓	\$3595	
PowerMac 9500/200 Tower System	1	3	6	✓	✓	✓	-	✓	-	✓	✓	2	-	✓	✓	✓	2	32	256K	2	✓	\$4899	

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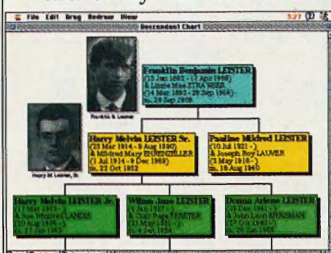
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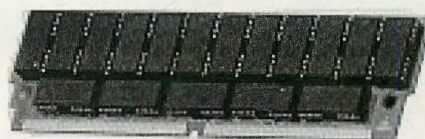
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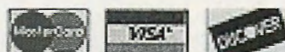


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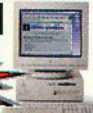
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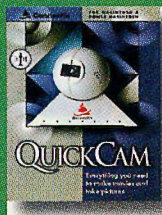
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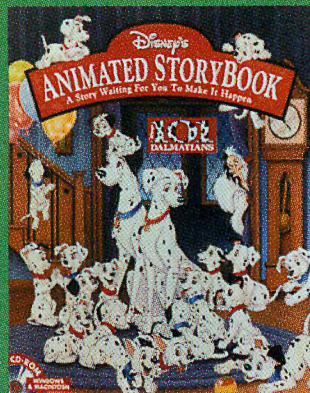
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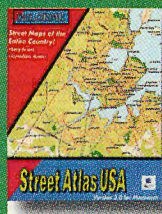


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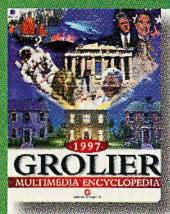
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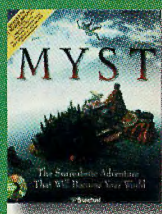
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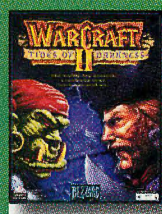
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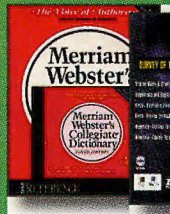
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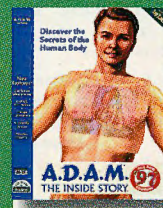
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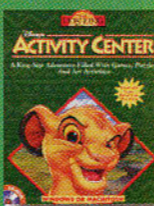
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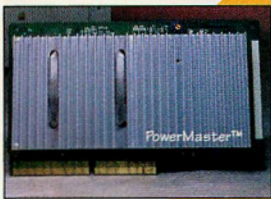
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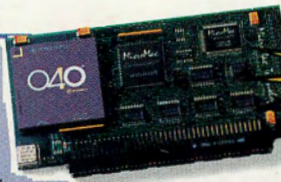
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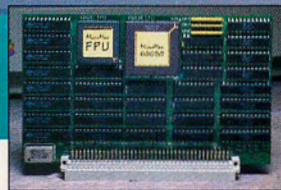
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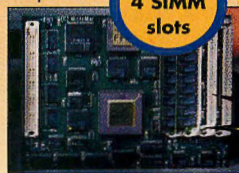


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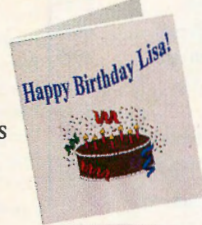
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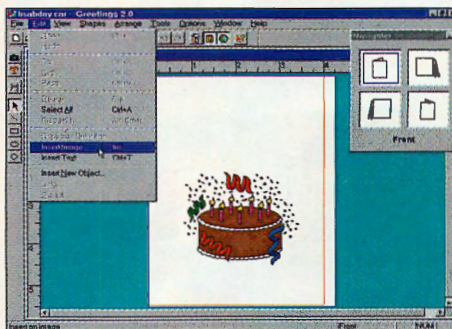
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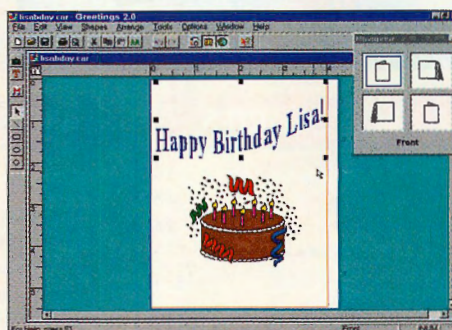
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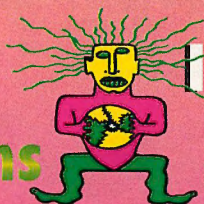
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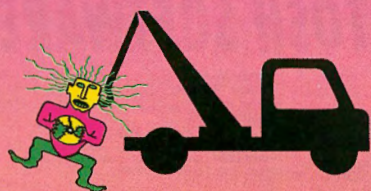
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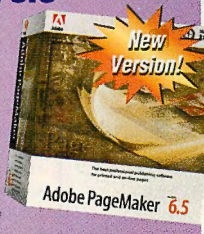
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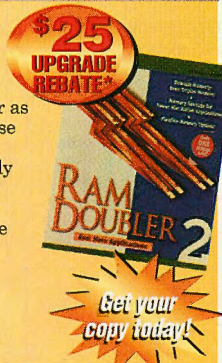
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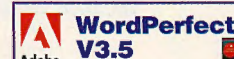
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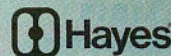
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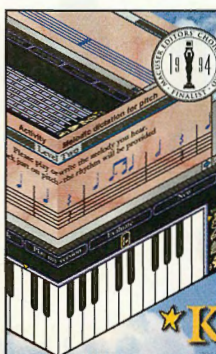
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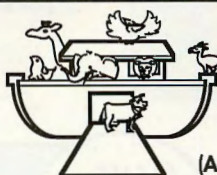
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COUNTER CULTURE

Microsoft recently stopped sales of Windows 95 in China after phrases such as "communist bandits" and "take back the mainland" found in the Chinese version of the program had police raiding stores that were selling the insulting product, according to the "Los Angeles Times." Microsoft quickly worked up a fix to remove the **cultural slams** that experts believe were added to the program during development in Taiwan.

A still from the shareware game, Mac in Escape Velocity.



Cult Classic

Rote of Passage

PCMCIA stands for: Personal Computer Memory Card International Association or People Can't Memorize Computer Industry Acronyms. You be the judge.

Marketing Coups

Dialing 800-SOS-APPL (800-767-2775) gets you through to Apple's help line, but stray a digit or two and you may be in for a few unpleasant surprises. 800-SOS-APLE rings up Dell Computer Corporation and dialing 800-707-2775 lets you "choose your own nasty phone fantasy" —for a small fee, of course.

PLEASE—
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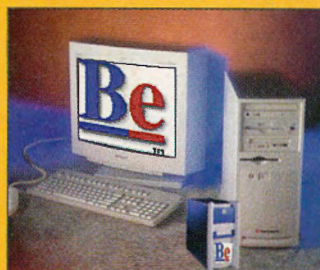


Doodle by Mark Simmons

ARTLESS COMPLIMENT

"That's why, to this very day, Apple is not considered by us cyberwonks to be a truly serious computer. It is viewed as a computer that is popular mainly with your flaky or artsy-fartsy type of individual—your artist, your poet, your beatnik, your flower-arranger, your heroin addict, your Barry Manilow." —Excerpt from humor columnist Dave Barry's new book, "Dave Barry in Cyberspace." And this coming from a man who toured in the Weiner-mobile.

Be-lieve it or Not



Since the Be OS will run on a separate hard drive on a Power Mac, wouldn't it make sense to sell a bundled hard drive/OS combo? And wouldn't it be great if it came in a box that looked like a little Be Box? Call it... the BeLittle. Currently the powers that Be aren't into the idea, but maybe with enough support, they'll see it's the only way to go, uh, we mean... Be.

E-mail them at marketing@be.com, fax to 415-462-4129, or write to: Be, Inc., 800 El Camino Real, Suite 300, Menlo Park, CA 94028.

Take It Easy

"Maybe Bob Dole is right that our schools are failing us. But maybe it's not the teachers union that's to blame. Maybe it's all those too-cute little Macs that are destroying the hard-to-work ethic that our generation has grown accustomed to." —"USA Today" columnist Sam Vincent Meddis complaining in his weekly "On the Web" column that Macs are too easy to use.

Love Hurts

"If each member of the AOL team could go personally to our customers and just spend half an hour with them and show them features of the service, they would be in love with AOL forever," Steve Case, chairman of America Online, as part of his announcement that AOL is targeting the 10 million member mark for this summer.

Just the Facts, Man

"MSFact is an unregistered trademark of Microsoft. There are explicit and implicit MSFacts... MS tech support is expert at explicit MSFacts, which apply to various intellectual properties of Microsoft. MSFacts do not actually converge with reality as we know it once you are more than 20 feet from Microsoft's offices." —Mac Developer Bill Stewart-Cole, in response to a comment on the Mac semper.fi mailing list in late September '96 that everyone needs Microsoft Office and Windows 95, whether they know it or not.

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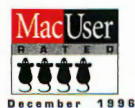
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ABUSE FOR MACINTOSH



Check out **ABUSE**. Created by Crack-dot-Com, ABUSE is 360° of side-scrolling action. **Napalm bombs**, **Lightning Prods**, and the **Death Sabre** are just a few of the toys at your disposal in this fluid and furious game.